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Readers are reminded that the mention of New Books, Articles, &c., in our lists is intended as a guarantee of their importance. The Editor of THE ACADEMY cannot undertake to return communications which are not asked for.

The next number will be published on Wednesday, May 15, and Advertisements should be sent in by May 11.

General Literature.

GOETHE AND HIS MOTHER.

W. Goethe. *Les Œuvres expliquées par la Vie. 1749-1795.* Par A. Mézières. Didier et C^e, 1872.

Frau Rath. *Briefwechsel von Katharina Elisabeth Goethe.* Von Robert Keil. F. A. Brockhaus, 1871.

It cannot be said that either of these recent contributions to the mass of Goethe literature adds materially to our knowledge of the poet or his surroundings. M. Mézières' book is pleasant to read, clearly conceived, lucidly expressed, and touches with intelligent sympathy upon a variety of points which possess an inexhaustible interest for the students of Goethe's writings. But the main idea of the work, so far from being new, is one which English and German biographers have worn, if anything, rather too threadbare, and it would have been more original to collect the purely imaginary characters and episodes in Goethe's poems than to arrange once more his life and writings in parallel columns with the familiar passage from *Wahrheit und Dichtung* as a motto. The other publication is tantalizing in a different way; the writer has some valuable new matter to communicate, and there was useful work cut out for an editor in collecting and arranging all that had already been published in scattered and inaccessible periodicals, &c. relating to or from the hand of the most *genialisch* of women. Unfortunately Herr Keil has trusted to the inherent interest of his subject and to the fact that he had some new letters from and to Frau Goethe to communicate; and he has simply not edited the book at all. He has reprinted some of the letters which were already known, but not all; he has printed new ones without giving an account of how they came into his possession, though he must have been aware of the importance of an authentic pedigree for the MS. letters, since he denounces those published by Bettina Brentano as in the main presumable forgeries; and, finally, he has not been enabled to give his work the completeness which it is certainly time for it to receive, if ever, by incorporating all the letters of his heroine which are known to exist, as, for instance, her very interesting correspondence with Lavater.

About Goethe's childhood and youth, Margaret and the *Mitschuldigen*, Aennchen and *Die Launen der Verliebten*, M. Mézières does not attempt to say anything new, for the simple reason that there is nothing to be said. The Sesenheim episode—the desertion of Friederika and the reflection of Goethe's self-reproach in the picture of Marie and Weislingen in *Götz von Berlichingen*—naturally introduces his judgment on the degree of blame which attaches to the poet who so often "loved and rode away," and on what is called Goethe's egotism in general. M. Mézières compares the stoicism with which he closed his heart against Friederika's tears to that with which he compelled himself to ascend the

spire of Strasburg Cathedral and to witness surgical operations. "S'il paraît quelquefois très-dur pour ceux qui se sont attachés à lui, il a commencé par être plus dur encore pour lui-même." This side of his character is not exactly hard to understand, and yet it is almost a psychological paradox that, after going out of his way to suffer acute nervous pain of one kind in order to deaden his acutely painful sensibility, he should yet be able at once and without practice to face the immediate moral suffering of a separation from Friederika, when he had but to be faithful to her to secure the quiet mind which he started by preferring to the ease and comfort of the moment. In fact Goethe's stoical conduct was the logical consequence of his Epicurean tastes. He would bear pain for the sake of learning not to mind it, or in order to escape the danger of it at a future time; Kästner wrote of him a little later: "He has strong affections, but great command over them;" and it is by the strength of his affections only that the degree of his self-command is measured when that self-command is alleged as a proof of his coldness of heart. M. Mézières, who, like most of his biographers, has rather a *tendre* for Friederika, does not excuse his treatment of her, but he thinks a prophetic instinct made her lover choose rather to be true to his real and stable self, to the Goethe of the Memoirs, than to any of the charming girls towards whom, as has often been pointed out, the Goethe of the Memoirs is really as cold as the youth of Frankfort and Strasburg tried to be. The story of the real and the ideal Lotte is pleasingly told, and the artistic merits of *Werther* as a romance appreciatively set forth: it is also plausibly suggested that as much of the relations between Albert and Lotte as is unjust to Kästner may be borrowed from Goethe's experience of another *ménage*, that of Maximiliane de la Roche (Bettina's mother) and Brentano, in which he also played the dangerous part of supernumerary in a matrimonial duet.

In explaining his works from his life there is a certain temptation to give undue prominence to the works which can over those which cannot be so explained; and it may be thought that M. Mézières dwells in consequence too long upon both Clavijo and Stella; the former from the autobiographical point of view is only a replica of Weislingen with another Marie very like the first, but the poet seems to be more nearly reconciled to himself, as he allows Carlos to make out a very strong case in favour of prudential selfishness. In *Stella*, where Mr. Lewes failed to discover any biographical element, M. Mézières detects an exposition of the drawbacks to marriage in the abstract suggested by the author's proposed marriage with Fräulein Schönmann (Lili). Again, unlike Mr. Lewes, he believes Lili to have been the object of a serious passion, and all the more on that account is he obliged to magnify Goethe's reluctance to make a final sacrifice of his liberty. He treats the extremely accommodating principles of all the ladies in the play and some of their remarks, which are unmotivated, if not actually out of character, as expressing or illustrating the writer's own view that constancy was a virtue—in women. But taken in connection with the poet's actual personal experience, there is another view possible. The husband in *Stella* is the same as Weislingen and Clavijo, only his desertion takes place after marriage instead of before, and the piece may almost be read as a justification of Goethe and his other heroes for refusing to put themselves in a position where the temptation to a worse offence than their own might have become irresistible. In *Iphigenia* and *Tasso*, M. Mézières tries, but without much success, to recognise the portraiture of Frau von Stein, the ruling influence in Goethe's life when they were commenced. In the latter work alone something of Goethe's surroundings may be

traced; the court of Weimar has lent some of its features to that of Ferrara, but Goethe's relationship to it at a time when he writes calmly to his mother that the best proof of his contentment with his situation is that he cannot even imagine one for which he would exchange it, is very unlike that of his melancholic hero; and though Frau von Stein was obdurate, she was not, like Eleonora, on a pinnacle of earthly greatness beyond his reach. Of course just then Goethe and Tasso made love in similar language, and before his flight into Italy Goethe was in a depressed, agitated mood which could be idealised into something befitting real misfortunes, but something more than this is meant in the cases where his works are manifestly "parts of a long confession," and if *Torquato Tasso* in any sense represents the emotions of the first Weimar period, it is not Goethe's love for Frau von Stein, but his love and longing for Italy, for art, for more light and harmony in his self-consciousness, that are shadowed forth in his hero's sighs.

M. Mézières very wisely declines to enter into unprofitable speculations as to what would have been the effect on Goethe's writings if he had not gone to Weimar, but the natural order of his book calls attention to the comparative cessation of the productive impulse before the Italian journey, and to its altered direction immediately afterwards, both of which facts it would have been within his province to explain; the rather that his conception of Goethe's character does not exclude a regret—the only regret possible in the face of his colossal achievements—that the fixed convictions and principles of art which he brought back from Italy had not been reached before the wild inspired madness of the young man "Goethe or the Devil" had burnt away half its strength. *Wilhelm Meister* and *Faust*, in which the two Goethes are most nearly one, do not come into the present volume, a sacrifice in some ways to chronological method, for their biographical interest is of course connected with the date when separate passages were composed, not when the complete work was published. Amongst the poems inspired by Christiane Vulpius, M. Mézières omits to mention *Der neue Pausias*, a graceful tribute to her original profession; and he is perhaps rather inclined to over-estimate the depth of the passion with which she inspired Goethe, for the unusual tone of sincerity and *abandon* in the poems of this date may be explained as showing, not that the feeling to be expressed was stronger than before, but that the poet was no longer afraid of being mastered by it if he admitted its strength. Of the subsequent marriage, M. Mézières, who is always on the side of morality, simply says, "Il aurait mieux fait de commencer par là."

The Frau Rätthin, Goethe's mother—Frau Aja, as her correspondents prefer to call her—occupied a larger space in the German literary world than is generally recognised. She was not merely the mother of her son, she was the woman who explained to his admirers how such a man could come into being; her house is the place of pilgrimage—*Casa Santa* is its regular name in the letters—for all that is illustrious, by birth or intelligence, throughout Germany. No man, woman, or child has ever left her presence with a discontented face; and many a celebrity who had been gradually repelled from the more exacting personality of the son remained through life on a footing of filial friendship and devotion to the mother. The writing-desk which she clears out once a month, and never without laughing, is "like heaven, all class distinctions are done away with in it; high and low, the pious and publicans and sinners, all form one heap. The good Lavater's letter lies quite peaceably by the actor Grossmann's, and so on." She has a certain round table, of which the fame seems to show that she neglected none of the material aids to social success;

and her phrase, the "tyrant's blood," for the good Rhenish vintages shed for her guests, met with a wide acceptance equally flattering to her invention and its subject. She seems to have possessed at once and by nature the Olympian serenity of mind which Wolfgang only conquered after many struggles and conflicts, in which, perhaps, just the tenderest bloom was knocked off his moral sensibility. Both were resolved to make whatever sacrifices were necessary to keep their minds clear and their imaginations untroubled by ugly visions, but Frau Aja somehow never found it necessary to sacrifice anything that even looked like a duty to a friend to this paramount duty to herself. The characteristic trait noticed by Mr. Lewes, that her servants were forbidden to tell her bad news, even if it were true, for she was sure to hear of it soon enough, is remarkable as the exact opposite of the animal curiosity which develops into the *Schadenfreude* of (generally feminine) gossips; and the remarks that follow on the danger of *coddling* the mind are a degree further from being applicable to the mother than to the son; there was a degree less of conscious effort in her conduct, though the object kept in view by both was identical, viz. to avoid mental suffering as a simply unprofitable distraction.

There are many signs in the correspondence that Frau Aja's intellectual gifts were held in as high esteem as her unalterable good humour. The Grand-duchess Amalia of Weimar writes with a packet of journals published "for private circulation" during a summer holiday:—"The authors are Hätschelhans" (the name generally given to Wolfgang in the confidential letters), "Wieland, Herder, Knebel, Seckendorff, and Einsiedel. Frau Rätthin's world-renowned connoisseurship will easily enable her to identify the author of each piece." And Wieland (who, like Merck and all who had been admitted within the charmed circle of intimacy at *Casa Santa*, addresses Frau Aja as an adopted son), besides asking her opinion on his own works, entrusts her with a delicate editorial commission. Klinger, one of the *Sturm und Drang* brotherhood (of whom Wieland asks, "Is it better with the youth, or does he still swirl lion's blood?"), offers to send a tragical tale for insertion in the *Mercur*, of which Wieland is editor, who, anxious not to incur the odium of rejecting the work, begs his correspondent to look at it first and tell him if it is good for nothing, that he may make an excuse to the author if so. Besides all tributes from without, and besides the fact that a sufficiently comprehensive culture is required in order to appreciate *all* Goethe's writings, as we cannot doubt his mother did; her own letters, heedlessly composed and spelt pretty much as Providence pleased, would of themselves go a long way to explain the dictum of Duke George of Mecklenburg: "It has never surprised me that such a woman should give birth to a Goethe."

The letters are generally short, homely in style and language, and absolutely free from literary pretensions:—"What does the woman want with me?" she exclaims, when Madame de Staël is in Frankfurt; "I have never written an A-B-C-book in my life, and my good genius will preserve me from doing so in future." And yet Goethe himself could not be more sublimely superior to the chatter of the clever Frenchwoman: "I felt as if I had a millstone round my neck." "It was all very nice so long as they would let me stay away." Even her denunciations of wit are amusing: "Wit, wit! it always reminds me of a draught; it's cooling, but it gives one a stiff neck." Is this Frau Aja or George Eliot? Unfortunately none of Frau Goethe's letters to Wieland seem to have been preserved, but one is not inclined to quarrel with the editor for having nevertheless printed as many of the answers as he could procure; they are amusing in themselves, and they help to complete our

idea of the person addressed. Some letters from and to the Grand-duchess Amalia are new, and they help to establish still more firmly the strange and edifying truth, that all through the relations between the grand-ducal family and the house of Goethe, the former never ceased to feel themselves the party obliged and benefited. Of course it is lucky for the ghost of Karl August that this was so; posterity would have torn him limb from limb if he had failed in any one particular of the respect due to the genius that deigned to harbour at his court; but the fame of a Maecenas is always so modest that one has to be careful not to under-rate the merits of the duke. M. Mézières expatiates very judiciously on all that his character gained under the influence of intercourse with his illustrious mentor; but the fact remains that he chose Goethe for his friend in defiance of all Weimar when a boy of eighteen, a conclusive proof that it was not from Goethe he acquired the gift for which Goethe praised him fifty years later, "of discerning men's talents and characters, and assigning his right place to each." One or two of his letters to Frau Rath are printed in this volume, downright and rugged in tone, but thoroughly affectionate. Two very interesting letters from Goethe himself refer to their visit to Frankfort, just before the *genius-journey* to Switzerland in 1779. He gives his mother the minutest instructions for her domestic preparations; the attendants and servants are to have mattress-beds, but for the duke and Goethe only a *Strohsack* each; no lustrés in the duke's room, he would laugh at them; four courses, neither more nor less, for dinner; and so on. The letters of Frau Rath to her grandchildren, to Friedrich von Stein, the boy whom Goethe almost adopted, and to her friend Unzelmann the actor, have been already published in different places, but there are four rhyming epistles to Fräulein von Göchhausen, for the sake of which all the editor's sins of omission and commission may be forgiven him. The writer declares:—

"Aber als mich meine Mutter gebar,
Kein Poetengestirn am Himmel war;"

but all the pieces show a remarkable facility of composition, and on p. 231 there are some lines—if we had space to quote them—that have a maternal likeness to some of Mephistopheles' tirades.

If the collection of Frau Goethe's letters had been complete, we should have earnestly recommended the work to the consideration of translators, though it must be admitted that the language of the free-spoken Frankfort dame might present some difficulties; the English, for instance, for *Potsfickermantel* has still to be invented. H. LAWRENNY.

Dante's Divine Comedy. [*Dante's Göttliche Komödie nach Inhalt und Gedankengang übersichtlich dargestellt. Mit biographischer Einleitung. Von Dr. Rudolf Pfeiderer.*] Stuttgart: 1871.

THE object of this book, like that of Miss Rossetti's *Shadow of Dante*, reviewed in the *Academy* of December 15, 1871 (vol. ii. p. 551), is to give educated persons a more accurate knowledge of the *Divine Comedy*, and thus to extend its popularity, and increase the number of its readers. The difference between the two mainly arises from their being intended for different classes of persons, Miss Rossetti's being rather suited to beginners, while that of Dr. Pfeiderer presupposes a knowledge of, and interest in, many of the questions which arise from a study of the poem, and aims at establishing certain views of his own. Thus, while the method of both is nearly the same—to give a brief life of the poet, general prefatory remarks to the whole poem, and an analysis of its three sections, with special introductions to each—the English volume is the more readily intelligible,

owing to its simplicity and the useful diagrams that accompany it, and the German, on the other hand, is far fuller and more exhaustive. Both introduce numerous quotations from the poem itself, for which purpose, as Miss Rossetti has made use of the translations of Mr. W. M. Rossetti and Mr. Longfellow, so Dr. Pfeiderer has availed himself of that of Streckfuss, and in one or two passages of those of Schlegel and Philalethes (the king of Saxony). The first of these, which is in rhyme, is admirably suited for the purpose from its spirit and vigour; and its weak point, that it is in imperfect *terza rima*, is less noticed in isolated passages: a complete reproduction of the rhyme of the original has not yet been accomplished in German, as it has in English by Mr. Cayley and Mr. Ford, though we are glad to see that such a translation, from the pen of Herr Notter, is in course of publication.

In his sketch of Dante's life, the writer has excellently pointed out what distinguishes Dante from all other great poets: the combination in his person of the character of idealist and artist with that of practical man of the world. Had he not been the sweet singer of the *Vita Nuova*, absorbed in his romantic love for Beatrice Portinari, and at the same time the Florentine patriot, deeply involved in all the struggles of his country, the *Divine Comedy* could never have been produced, or, at least, would have wanted that universality and that union of the real and the ideal in which its greatness largely consists. And, in like manner, his relation to his age is a twofold one, which only a man of the highest genius could occupy; that age itself wearing a twofold aspect, checkered with strange contrasts of light and darkness, marked by examples of extraordinary piety and extravagant crime, and, in the midst of profound ignorance and wild confusion, producing vigorous growths in art and literature, and developing the germs of political organization. In the midst of these discordant elements we see the figure of Dante, "facing, like a Janus, at once backwards and forwards." The representative of his time, in all its beliefs and conceptions of things, he is at the same time the prophet of the coming age. He is a sincere and orthodox Catholic, but, not the less, half a reformer. His political views are both limited by and pass far beyond the circumstances which surround him. Like the seers of the Old Testament, he finds in the present the means of embodying and representing laws of permanent application.

Towards the end of the volume, Dr. Pfeiderer has given an excellent *résumé* of the various views that have been taken of the purpose and meaning of Dante's great poem—a survey from which we may learn how immense has been its influence on the intellectual life of succeeding generations. With the earlier interpreters the moral and theological aspect is almost exclusively predominant, even to the ignoring of the literal meaning. In later times another one-sided mode of interpretation has also sprung up in Italy, and for the most part found its home there, according to which the political side of the poem assumes overwhelming importance. It is in Germany, during the last half-century, that a less exclusive and more qualified view has arisen, admitting at once three elements, the personal, the moral, and the political; though here again two schools are to be found, according as the greater prominence among these is assigned to the moral and religious significance—on which side are to be found the great names of Witte and Philalethes—or to the political, which is ably represented by Wegele. Our author claims to be himself the first to place the three in a co-ordinate position, and to put clearly forth the unity of purpose in the poem, by finding a common point in which the three may be combined. This is the person of Dante; so that the poem is to be regarded as the mirror of his

experience in life and thought ; and its outline, in particular, represents the history of his sin, his conversion, and the mode of his renewal. But beyond this he sees in himself human nature personified, and finds in his own struggles the representation of their struggles, and in his own progress towards salvation the way which they also have to follow ; thus excluding the didactic tendency, which is essentially unpoetical. In the first instance, it is the men of his time of whom he stands forth as the embodiment ; and thus the politico-historical side of the poem is introduced, explaining the means of their temporal renovation ; afterwards, in a still wider application, it is mankind at large, whose eternal restitution is to be brought about in the same way as his own was ; and the consideration of this involves in its universal aspect the moral and theological significance of the story. Therefore it is that he relates his vision for the instruction of men, in accordance with the injunction laid upon him by his forefather Cacciaguida in the *Paradiso* (canto xvii.)—

" Rimossa ogni menzogna,
Tutta tua vision fa manifesta,
E lascia pur grattar dov' è la rogna ;
Che, se la voce tua sarà molesta
Nel primo gusto, vital nutrimento
Lascerà poi quando sarà digesta."

In this way the poem in every sense deserves the appellation of "The Soul's Epic." At the same time, in the course of its development, we must expect to find that now one, now another, of these meanings will take the most prominent position, and not unfrequently one will overlie the other : it is from the latter of these results that the manifold application of certain passages arises.

This view of the *Divine Comedy*, Dr. Pfeiderer proceeds to apply to that most difficult subject, the allegory which it embodies. In this likewise he finds a corresponding threefold character. Thus, in interpreting the *Selva*, he applies it, first, to Dante's own youthful errors ; next, to the sinfulness of mankind ; finally, to the confusion of his own time, arising from political aberrations and false relations of Church and State. Similarly, when he defines the position of Dante's two guides, Virgil and Beatrice, these characters are made to represent respectively—first, his favourite poet and master in the poetic art, and his first love, the thought of whom had led him to heavenly things ; secondly, reason and revelation—Virgil being described as saying of his own function (*Purg.* xviii.), "quanto ragion qui vede, dirti poss'io ;" while some things which are attributed to Beatrice, especially the circumstances of her appearance in the Terrestrial Paradise, are not less than blasphemous, if she is to be regarded as a mere woman, however glorified ; thirdly, the temporal institutions necessary to human welfare, and especially the Empire—Virgil, as the author of the *Aeneid*, being the poet of the origin of the Roman empire, and consequently being constantly represented in the *Inferno* as laying special stress on offences against the state ; and, the primary means of man's eternal welfare, divine grace, quickening the soul. Now in estimating this and every other view of the allegory in Dante, we ought always to bear in mind two things—on the one hand, that from the character of the poet's mind, and from what we find in his prose writings, we have reason to expect every kind of refinement of meaning in his poem ; to which it should be added that in his epistle dedicatory to the *Paradiso*, addressed to Can Grande della Scala, he expressly attributes to the poem a moral and allegorical meaning : on the other hand, that it is easy to find a recondite meaning where there is none, and to engraft theories of our own on Dante's writings. In the present case, making all allowance for the former of these, we cannot help feeling that Dr. Pfeiderer, notwithstanding the completeness of his scheme, has erred too much on the side of ingenuity in assigning to Virgil a political

character ; in fact, in one place (p. 179) he seems somewhat to be sensible of the difficulty of it, because he is forced to include under the temporal institutions of which Virgil is the representative, the outward and visible functions of the Church, which he has not mentioned elsewhere. Still, we think that in this portion of his work, as well as elsewhere, Dr. Pfeiderer has done good service to the study of Dante ; and we regret that he has not given us his views on the intricate allegory of the exceedingly difficult 32nd canto of the *Purgatorio*, which, strange to say, has been passed over entirely unnoticed. H. F. TOZER.

Varnhagen von Ense's Biographische Portraits. Leipzig :
Brockhaus.

LUDMILLA ASSING, opening once more the inexhaustible Pandora box in which her late uncle's manuscripts are contained, has presented us with a new series of biographical essays written by Herr Varnhagen at different periods of his life. For students of a certain phase of North German literature and society, the representatives of which were attracted by Rahel's sentimental *esprit* and her husband's birth and position, the opinions and troubles of Thoreff, the great physician or quack as the reader may take it, and of Caroline von Fouqué, the wife of the author of *Undine*, and herself a popular novelist, may be of some importance. The only portrait of general interest, however, which the volume contains is that of Clemens Brentano, one of the leaders, and, as far as mere poetical power is concerned, decidedly the most gifted representative of the romantic movement in Germany. The material afforded in the sketch of his professorial character, and several of his letters addressed to Rahel, is the more valuable, as our sources for the knowledge of his character and literary career have hitherto been so extremely scanty. Besides the contrast between the characters of the diplomatic man of the world and the eccentric poet, as it became soon but too evident when they met at Töplitz in 1811, and which is still recognisable in every line of Varnhagen's account, is highly amusing and equally characteristic of both parties concerned. Varnhagen, in his capacity as literary amateur, had seen enough of the "Sturm und Drang" of contemporary poets not to be shocked by a moderate amount of extravagance and quaintness of manner. Still the childish braggadocio and sometimes heartless vein of freak and foul-mouthed gossip, which in Brentano subsist together with the most high-minded enthusiasm for the beautiful, were quite a puzzle to the experienced diplomatist. After relating a particularly unpleasant trick played him by the poet, our author adds in despair : "I observed this sudden transmutation with amazement, and began to see what an unsafe customer I had to deal with." This same whimsicality, systematized and thoroughly affected as it was in most cases, contained at the same time the fatal germ of destruction for the noblest aspirations of Brentano's life and works. Occasionally it intruded even into the sanctissimum of his catholic mysticism, the sincerity of which it displays in a rather dubious light. Varnhagen relates the following amusing anecdote :—Brentano's sister Bettina discovered in a picture of St. Peter, which he pretended was drawn by himself exactly after the vision of the well-known stigmatized "Nun of Dutmar," an old tobacco-pouch, which was connected with various jokes of former times, and which now served as a wallet to the saint. When he found himself discovered, the poet heartily joined in the merriment of his sister. This fickleness of character, although not impairing our admiration for his genius, must have made personal intercourse with the poet a matter of extreme difficulty. Once Varnhagen was obliged to resort to personal chastisement, which had at once the desired

effect; the poet replying to this severe treatment with great meekness: "You will be my best friend, like Görres, who has also boxed my ears." The letters to Rahel form a sort of commentary to Varnhagen's sketch, and are quite in the character of their writer, a mixture of sensual religious mysticism and childish silliness, interrupted by passages full of deep poetical beauty, and a kind of melancholy humour to be met with only in the works of German romantic poets, and which might be expected from the creator of Ponce de Leon and the "schöne Annerl." F. HÜFFER.

NOTES ON LITERATURE AND ART.

The controversy respecting the Polish or German extraction of Copernicus seems to be very nearly decided, in an anonymous and temperate pamphlet on the former side of the question, reviewed in the *Allgemeine Zeitung* for April 5. As the name of a village in Upper Silesia in the thirteenth century, and as a family name at the present day, Copernik, sometimes spelt Kopernik, Kopermak, Kopernicki, is not infrequently met with, and referred etymologically to the Slavonic Kopr, Koper, *anethum graveolens* with the common termination *ik*. It was always known that the astronomer's father resided at Cracow before moving to Thorn, and the evidence, all presumptive, in favour of his having been a German immigrant counts for very little against the un-Teutonic sound of his name. His wife, Barbara Watzelrode, it is admitted, was of German parentage, and the only point still undecided is whether Barbara's mother was of the same stock as her husband, since otherwise a trifling advantage would rest with the Polish patriots.

J. Frohschammer writes to the *Allgemeine Zeitung* (April 8) on "Philosophy and Darwinism," objecting to the latter its want of a sound speculative foundation and its compatibility with the common theory of creation, and hinting at the superiority of the abstruser German philosophy with its promise of a transcendental Pantheism.

The German papers have been commenting on the supposed inaccuracy of a statement relating to the manuscript of Humboldt's *Kosmos* which appeared in a French publication; such a MS. had been presented by Professor Buschmann to the King of Prussia for the Royal Library at Berlin, with a very dutiful letter; and it was not generally known that the second MS., a fair copy, with the last corrections of the great author, had also been presented by the same person to Napoleon III. (with a still more dutiful letter, explaining that Humboldt's "heart was ever French"), and accordingly is still to be found at the National Library of Paris. Humboldt wrote in the Italian hand, and with lines that slanted so much from left to right that, to keep them straight, as he grew older, he gradually shortened them almost to a single word, so that each page of the white quarto paper on which he wrote was divided into a number of slender columns.

In an article by W. Lang in a recent number of *Im Neuen Reich*, on "Danteliteratur in Deutschland," it is remarked that notwithstanding the numerous contributions to the subject, and especially the translations of the poem which are constantly appearing in Germany, the *Divine Comedy* is not, nor is likely to be, a popular book in that country. Dante holds a very different position in respect of German culture from Homer and Shakespeare. This, the writer remarks, is not wonderful, because of the antiquarian research required to understand the poem, and the need of the reader's throwing himself into a point of view essentially different from his own. It is also suggested that the multiplicity of ideas and interests which Virgil and Beatrice represent detracts from their reality, and causes us to follow their guidance with less confidence. The fact that modern Italians have found no difficulty in making Dante their great political poet, notwithstanding the apparently anti-national tendency of his views, is explained by pointing out that the circumstance of the princes, who would preside over the empire in Dante's scheme, being German is a mere accident to him; he only regards them as Roman; and though they have their

relation and their duties to the whole world, yet the care of Italy is their especial function.

M. Didier has just brought together in one volume the articles on Prudhon which M. Charles Clément has contributed at different times to the *Gazette des Beaux-Arts*. The work has been fully completed by the author, and is accompanied by thirty fine engravings, reproducing the painter's most capital works, several rare etchings by him, and some of his principal drawings. M. Charles Clément is continuing his study of modern French painters; and the *Gazette* will publish in its next number the commencement of an important work on Léopold Robert. M. Clément was the intimate friend of the late Aurèle Robert, and has had the opportunity of acquiring from him much private and valuable information concerning the life of his brother Léopold.

The portrait of M. Thiers, on which Mlle. Jacquemart has been for some months past engaged, will be exhibited at the coming Salon.

M. Émile Vernier was entrusted by M. Corot, some time back, with the task of reproducing several of his paintings, in a set of lithographs published by M. Marion, the director of the *Librairie artistique*. These are now exhausted, and M. Vernier has just completed a second and more important series, in which will figure "Le Matin," "Le Soir," "Sodome," "Le Marais," "Le Berger," "La Toilette." The new issue will thus represent the genius of Corot in each of its various forms.

The Archaeological Congress of France will be held this year at Vendôme, and will commence June 18. A statue of Ronsard will be inaugurated during the sitting of the congress. A retrospective exhibition of the art-work of the Vendômois is in course of organization, and will be opened at the same time.

The Italian papers announce an open competition for a statue in white marble representing Joseph Mazzini in proportions somewhat larger than life. This statue is intended to replace the bust which was deposited at the Capitol on the 17th March, 1872. The competition will close on the 18th June this year. Designs are to be sent to 81, Via della Croce, Roma.

Three terracottas, once in the Praun'sche collection at Nürnberg, and now the property of Professor Hänel, of Dresden, have been offered for purchase to the British Museum. They are said to be from the hand of Michelangelo. The sum asked is 3000*l*. The subjects are Morning, Day, and Night. It is not possible to speak positively as to their merits or authenticity from a brief inspection of the photographs which have been forwarded to England. If they are really the first thoughts for the figures of the Medici tomb, they should undoubtedly be secured.

Im Neuen Reich (No. 14) contains four hitherto unpublished letters of Niebuhr's, written from Rome, 1816-19, to the Minister v. Altenstein. They are valuable, as showing the impression made on him by the movement then inaugurated by the young German artists in Rome. The paintings of Cornelius, Philip Veit, Overbeck, and Wilhelm Schadow, in the Casa Bartholdy, excite his eager hopes, and he earnestly urges their claims to encouragement and aid from the government. He succeeded in obtaining some small sums for them, and even helped them himself as far as his means allowed. He urged the appointment of Cornelius in 1817, as the fitting person to start afresh the Düsseldorf Academy of Art, and eventually obtained for him (1819) an invitation to Berlin with the commission to decorate the theatre in fresco. But the letter reached Rome a month too late; Cornelius had already departed for Munich, and had there engaged to carry out the works of the Glyptothek. The letter from Cornelius to Reimer, appended at the end, contains nothing specially worth notice.

The well-known art-student and collector Baron R. v. Retberg, of Munich, has recently brought out a catalogue of Dürer's etchings and engravings chronologically arranged. This book,

which is the result of many years' labour, is a most valuable contribution to Dürer literature. It offers not only a completely new arrangement of the known materials (Bartsch and Heller are arranged according to technic or subject), but in every instance where written date fails us, carefully stated critical proof is given. The catalogue is prefaced by a sketch of the life of the master, in the form of a convenient summarised table. It had been intended to bring out the volume in time for the Dürer exhibition, which was projected at Nürnberg in 1871, but the war delayed its publication, and also deprived the exhibition of much of its contemplated importance. The *Germanische Museum* is at this moment busied in the endeavour to bring together a collection of all Dürer's known works, either in originals or in accurate copies.

A third edition of Karl Heideloff's *Die Ornamentik des Mittelalters* has just been brought out with a critical, revised text by Professor Bergau.

The number of sales which are taking place in every direction, and which are too important to be left without comment, is almost unprecedented. At the end of March the sale of the Gsell collection at Vienna realised about 2,500,000 frs. French pictures came well to the front. The "Troubadour" of Couture went for 46,000 frs., little bits by Diaz fetching 4000 and 6000 frs. a piece. It is said that a well-known London dealer bought up a lot of canvasses of "all sorts," and the Viennese are delighting themselves with the thought of the number of copies the English are going to swallow.—M. Riocreux's collection of porcelain and faience, which was sold by auction on March 30, also merits notice. One of the principal pieces was a dish signed on the reverse, "1530, M. G. da Gubbio." The subject in the centre was "Romulus and Remus suckled by the Wolf." The colouring is polychrome with metallic ruby reflections. This went for 700 frs.; an Urbino bowl from the Pasolini collection for 112 frs. The specimens of Nevers and Rouen pottery went comparatively low. For example, a "Flambeau appliqué" (an arm issuing from the mouth of a mask), which was an extremely rare example of Nevers, obtained but 36 frs.—A large portion of the work of Androuet Ducerceau came to the hammer in the second week of April, at the Hôtel Drouot, amongst the effects of the late M. Vaudoyer, the well-known architect. This excessively rare collection was secured for the Berlin Museum, in spite of the zeal of a French amateur, who ran the biddings up to about 5000 frs.—The apparently low prices given at the Persigny sale are now explained by the fact that many of the attributions were incorrect, and a considerable portion of the paintings were either damaged or repainted. The consequence was that a few good things went for less than their real value, so disastrous was the impression produced on amateurs by the close neighbourhood of more than doubtful work. Amongst others may be cited "The Fool," attributed to Velasquez, but probably by the hand of some follower or pupil. This picture, really remarkable in itself, fetched but 750 frs., and was certainly worth more. It became the property, together with the Reynolds ("Prince of Wales"), of M. Maurice Cottier.—The Regnault sale, paintings (19), water-colours (20), drawings (83), studies, sketches, &c. (42), realised 141,031 frs. The principal sums were: for a "Panneau décoratif," 25,000 frs.; "Sortie du Pacha à Tanger," bought by M. Haro, 10,000 frs.; a water-colour drawing, "Cour mauresque avec laurier-rose," 6300 frs.—The two first days of the Gillott sale at Christie and Manson's produced 73,236*l*. Some of the highest prices were as follows: "Hampstead Heath," by Linnell, 1660 guineas; the "Woodlands," Linnell, 2500 guineas; "Roast Pig," by Webster, 3500 guineas; "The Wooden Walls of Old England," Stanfield, 2700 guineas; "The Bay of Naples," by W. Müller, 2000 guineas; "The Chess-players," W. Müller, 3950 guineas. This picture, which is perhaps the artist's *chef-d'œuvre*, excited a keen competition between Mr. Addington and Mr. Agnew, who eventually carried it off. Turner's "Going to the Ball" and "Coming from the Ball, San Martino, Naples," fetched respectively 1700 and 1500 guineas. These pictures are in his later manner. "Checkmate Next Move," by Mr. Horsley, was knocked down to Mr. Cox for 1600 guineas. That portion of Mr. Gillott's collection which represents the early English school came to the hammer on the 26th and 27th April; and the third part, including the old masters and watercolours, will be sold on the 3rd and 4th May.

A remarkably fine specimen of Fortuny's work is now on view at M'Lean's gallery in the Haymarket. The subject is the interior of a Moorish court of vast size. Two culprits lie already in the stocks, while a third is struggling hopelessly with the executioner, and from an inner recess a solemn assemblage look down on the proceedings. The foreshortening is very fine; and in spite of the small size of the figures, the character of Eastern attitude is given with that simple truth which is most unapproachable. A ray of light, clear as day, streams across the picture; and every shadow is full of the most subtle pulsations of colour, the key-note of which is given in the blue-green edge of a motionless pool of water which sleeps, full of glassy reflections, to the left in front. There is no touch of poetry or sentiment, but an air of brilliant and absolute certainty characterizes the whole with a daring charm.

New Publications.

- HUGO, Victor. *L'Année terrible*. Paris: Michel Lévy.
KINKEL, G. *Euripides u. die bildende Kunst*. Berlin: Ebeling u. Plahn.
LANETTI, V. *Degli studi, delle opere e della vita del pittore Sebastiano Santi*. Lettura. Venezia: Longo.
PFIZMAIER, A. *Kunstfertigkeiten und Künste der alten Chinesen*. Wien: Gerold's Sohn.
WESTPHAL, R. *Geschichte der alten u. mittelalterlichen Musik*. I. u. 3. Abth. (Plutarch üb. Musik.) Leipzig: Leuckart.
WILLE, Eliza. *Johannes Olaf*. 3 Bde. Leipzig: Brockhaus.

Theology.

The Book of Job. [*Das Gedicht von Hiob*. Hebräischer Text, kritisch bearbeitet u. übersetzt, nebst sachlicher u. kritischer Einleitung, von Adalbert Merx.] Jena: 1871.

THIS volume, as its title indicates, is not a commentary. The author, who has already distinguished himself in other departments of Semitic study, does not appear ambitious to add to his already well-earned reputation, that of a Biblical commentator; though, if there is one book of Scripture which more than another stands in need of detailed treatment, it is the Book of Job. Dr. Merx, however, has undertaken a task which is even more difficult and important than a commentary. He has endeavoured, with the aid of the ancient versions, and in particular of the LXX, to present the original text of Job in a revised and amended form, and certainly no more acceptable service could be rendered to the student of the Hebrew Scriptures than a successful attempt to do so.

The revised text, which, with a translation, forms the principal part of the volume, is preceded by an introduction, in which the author discusses, with distinctness and brevity, the usual questions as to the subject-matter, form of composition, age, &c. of the poem, on which so many conflicting opinions have been expressed. It must suffice to remark here that he considers the Book of Job to be an ideal history, in which the chief personage (*'Ijjob* = "the antagonist") is the embodiment of the writer's doubts and antagonism to the received faith, while his three friends are the representatives of that faith, and of the writer's efforts to cling to it and overmaster his sceptical thoughts. A sublime and overpowering revelation of Jehovah brings the conflict to a close. With regard to the revision of the text, the author endeavours (1) to show its necessity, and (2) to point out the principles on which it should proceed. He by no means withholds from the Jewish doctors the due meed of applause for the singular care with which the sacred text has been handed down through so many generations; but at the same time he most justly observes that, besides the question whether the Jewish doctors have faithfully transmitted the text anciently received by them, there is

another of still greater moment, viz. : What was the state of the text when they received it? It is not sufficiently considered that the extraordinary precautions which they adopted for the purpose of preserving the text unchanged must have had the effect of perpetuating old errors, as well as preventing the intrusion of new ones. Unquestionably all the books must have suffered, some to a greater, some to a less extent, between the time of their original composition and the age when their transmission began to be an object of anxious care to the Jews. This is evident not only from a comparison of the traditional text with the most ancient versions, but also from a comparison of various parts of that text with one another, as, for example, the corresponding sections of Chronicles with the text of Samuel and Kings. When, therefore, in our study of the Hebrew Scriptures, we stumble, as we not unfrequently do, on passages from which it is impossible to extract any suitable or even intelligible meaning without having recourse to the most arbitrary treatment, we ought not to keep out of view the possibility of our embarrassment being occasioned by a corruption of the original text, though, indeed, there are scholars who seem prepared to take all sorts of liberties with the grammar and lexicography of the language, rather than sanction the slightest deviation from the Masoretic tradition. Dr. Merx gives examples from Job and elsewhere of textual errors arising from the interchange, the repetition, and the omission of letters. Under the last head he adduces Job xxvii. 18, "He buildeth his house as a moth," עֵשֶׂת, for which he would read, on the authority of the Greek and Syriac, עֵשֶׂת, as a spider (comp. viii. 14); and he accounts for the change to the present text by supposing the existence of a blemish in the original MS., thus—שׁ ≡ כּ.

The principles of revision on which Dr. Merx proceeds are in theory extremely simple. First of all, by comparison of extant MSS. he would endeavour to reach as close an approximation as possible to the text of the archetypal MS., from which they have all been derived. The text thus obtained he would set down as one codex. Then, from the ancient versions, chiefly the LXX and Peshito, he would do his best, by the careful study of their language and spirit, to reproduce, in the case of each disputed or difficult passage, the consonantal texts which lay before their translators. To these texts, also, he would assign the rank of ancient codices. And by comparison of the codices thus obtained from the versions with that obtained from the MSS. he would restore the true text. To purely conjectural readings he would have recourse only in extreme cases, when all other means of emendation have failed. With regard to the relative importance of the codices just mentioned, he assigns the first place to that derived from the LXX, as being, in his opinion, more ancient than the others. To the old Syriac version he assigns a middle place, both chronologically and with respect to the character of its readings, between the LXX and Masoretic texts; and for its use in textual emendation he lays down the following rules:—(1) The reading, in which the LXX and Syriac concur, is the more ancient. (2) The LXX is to have the preference, but not very decidedly, even though the Masoretic reading is confirmed by the Syriac. (3) If the Masoretic and LXX concur against the Syriac, the latter is at once to be rejected, unless the internal evidence in its favour is very decisive. The Vulgate and Targum, being both founded on the traditional text, are naturally of inferior value as aids in its reconstruction, except in those cases in which they depart from it and agree with the LXX and Syriac.

It will thus be seen that the main principle on which the author proceeds in his revision of the text of Job is that the LXX represents an older and better text than the Maso-

retic. We believe very few indeed will be found to concur with him in this opinion. In fact, he does not himself venture to carry out the principle to its legitimate results; for it is usually to the emendation of the text only in vexed passages, and not always even in these, that he applies it. Everywhere else he adheres to the traditional Hebrew text against the LXX. But if the LXX text be older and more reliable than the Masoretic in obscure passages, must it not also be so in passages which are not obscure, but in which nevertheless it deviates from the Hebrew? One would imagine it must be so. And, therefore, if the Masoretic text is accepted as a general basis for the revised text (and the author does so accept it, usually following it even where it differs from the LXX), consistency requires that it should have the preference throughout, except in those cases in which it can be shown that the readings suggested by the LXX are superior, not as LXX readings merely, but on other grounds.

Independently, therefore, of the practical difficulties which must be encountered in making the attempt to revise the text of Job on the author's principles, and of which no one is better aware than the author himself, we must express our conviction that the principles themselves are erroneous, and that the adoption and application of them cannot be expected to lead to a satisfactory result. This conviction, we must add, has been quite confirmed by an examination in detail of the author's revised text, which we can by no means accept as a nearer approach to the original form of the text than that of our Hebrew Bibles. We fear that the chief blemishes in the present text date from a period anterior to the age of the earliest version, and cannot now be amended otherwise than by critical conjecture. At the same time we heartily commend the spirit in which the author has undertaken so difficult a task, and the praiseworthy modesty with which he speaks of the result of his labours.

Our space does not permit us to examine Dr. Merx's views of the so-called strophical arrangement of the poem, which also bear (somewhat unfortunately, we think) upon his reconstruction of the text.

D. H. WEIR.

Intelligence.

Mr. Sanday, of Trinity College, Oxford, well known to our readers by his articles on Keim's *History*, has published the first-fruits of his researches into *The Authorship and Historical Character of the Fourth Gospel*. Those who are best prepared to agree with his conclusions will appreciate the fairness and simplicity with which they are defended. The work is, in fact, remarkable for more reasons than one. First, on account of the thoroughness with which the author has examined the most recent works on the subject, whether English or German, conservative or liberal in tendency. We almost fear that he has carried his laudable desire to be abreast with the latest investigations to an extreme, and that he has injured the effect of his book by too exclusive a consideration of Keim and Sir R. Hanson. Secondly, because of his frank acceptance of the fact that the external evidence is insufficient to decide the question at issue, and his consequent limitation of the enquiry to the evidence supplied by the Gospel itself. Chapter after chapter is analysed, and the psychological verisimilitude of the details brought into bold relief. The circumstantial precision of the narrative is thus found to be so great that "Shakespeare himself, if he had been born after the taking of Jerusalem, could not have written the fourth Gospel as it is" (p. 295). The assumptions of the work are those of a sober orthodoxy. Inspiration is a (supernatural) "heightening of natural faculties;" the miracles of the Gospels are accepted as in the gross "historical," without enquiring too closely into the quality of the evidence. It seemed desirable to address this warning to the reader, in his own interest as well as that of the author. It would be unfair to Mr. Sanday to infer from the studied moderation of the title of his work, and from his adoption—at least in part—of the method of "liberal" criticism, that he is without an opinion on the graver matters which underlie such researches as the present. And it would be unfair to his readers to allow them to suppose that he has done more than touch the outskirts of the question at issue. To be complete, the book should

contain an examination into the antecedent probability that the biographies of the founder of the Christian religion contain a legendary accretion. Mr. Sanday not only ascribes the fourth Gospel to St. John, but implicitly denies that it contains any legendary matter (p. 273). This involves a similar denial with regard to the other Gospels, which no antagonist could accept without demanding a proof. Objection may and doubtless will be offered to many of Mr. Sanday's "psychological" arguments, some of which have a strong likeness to the century, and might possibly have been modified by a more special knowledge of Old Testament criticism. We notice, however, that he accepts "the second Isaiah" (p. 40) as a distinct part of the Old Testament Scriptures. This implies some thoughtful study of the subject, though it follows naturally from the psychological point of view at which the author has placed himself. A review of the work will follow.

A valuable discovery has been made, in the episcopal archives at Coire (Grisons), of two fragments of an old Latin version of St. Luke, which had been stuck on the inside of the cover of a book. They contain Luke xi. 11-29, xiii. 16-34. In the new number of the *Studien und Kritiken*, Prof. Ranke gives the two most important columns, containing Luke xiii. 16-25 ("alligavit Satanas—foris stare dicen[tes]"). He remarks that the text agrees most closely, especially in its omissions, with that of the Codex Vercellensis (saec. iv.). Either the MS. from which it is taken was a copy of that codex or else both MSS. were derived from one and the same source. Vercelli is only thirty (German) miles from Coire.

The Society for Biblical Archaeology has lately received a rich present for its library, in the shape of an ancient Pentateuch-roll, dating apparently from the tenth century. This MS. is the only copy of the Pentateuch as used by the Aden Jews, descendants of the pre-Mahometan inhabitants, which has yet reached this country. The council of the society hope soon to exhibit the roll to the public, with a detailed examination of its philological and archaeological peculiarities.

Contents of the Journals.

Zeitsch. f. wiss. Theologie, vol. xv. No. 3.—Justin's Relation to the Acts of the Apostles, by Fr. Overbeck. [Seeks to show that Justin, like the Acts, belongs to a stage in post-apostolic gentile Christianity when the genuine Pauline doctrine had lost much of its purity.]—Peter in Rome and John in Asia Minor, by A. Hilgenfeld. [Conservative; against Lipsius on the one hand, and Scholten on the other.]—On the Contradiction between 2 Tim. iv. 20 and Acts xxi. 29; or, On the Imprisonment of the Apostle Paul, by H. Lucht.—Luther's Birth-year again, by H. Holtzmann.—Notices of books.

Theological Review, April.—On the Development of Opinion in the Early Christian Church, as indicated by a comparison of the different books of the New Testament. Part II. By the late J. J. Tayler. [A charmingly written popular, but not at all superficial, essay.]—Theism, Atheism, and the Problem of Evil, by Moncure D. Conway.—St. Paul and the Nero-Legend, by C. J. Monro. [Nero the veiled, and Vespasian the unveiled Man of Lawlessness; Vitellius "the restraining agent."]

Journal of Philology, No. 7.—Notes on three passages of Exodus, by W. A. Wright. [1. Ex. iii. 14, "I AM, because I am." 2. Ex. xxii. 4 (5). Read אֶת־הַשֵּׁרֶף, and render, "If a man shall set on fire . . . and shall put the burning fuel so that he burn up the field," &c. 3. Ex. xx. 4, 5; לְמִנְיָהּ, not "likeness," but "shape," or "form." Render, "And as to any form . . . thou shalt not bow down to them."]

New Publications.

CREMER, H. *Biblico-Theological Lexicon of New Testament Greek*. Transl. by Dr. W. Simon and W. Urwick. Edinburgh: T. and T. Clark.

DELITZSCH, Fr. *Commentar zur Genesis*. 4. Auflage.

HAVET, E. *Le Christianisme et ses Origines: l'Hellénisme*. Paris: Lévy.

KEIL, C. F. *Biblicher Commentar. Jeremia-Klagelieder*. Leipzig: Dörffling u. Francke.

KNOBEL, A. *Der Prophet Jesaja*. 4. Aufl. Bearb. v. Dr. L. Diestel. Leipzig: Hirzel.

PAUL of Tarsus. By a Graduate. Macmillan.

SANDAY, W. *The Authorship and Historical Character of the Fourth Gospel*. Macmillan.

SCHRADER, Eb. *Die assyrisch-babyl. Keilinschriften und ihre Resultate für das A. T.* Giessen: Ricker.

VAUGHAN, R. B. *The Life and Labours of St. Thomas of Aquin*. Vol. II. Longmans.

Physical Science.

Exotic Butterflies; being Illustrations of New Species. Parts 1-80. By W. C. Hewitson. Van Voorst.

Equatorial Lepidoptera, described by W. C. Hewitson. Van Voorst. *Lepidoptera Exotica*; or, Descriptions and Illustrations of Exotic Lepidoptera. By A. G. Butler. Parts 1-11. Janson.

Cistula Entomologica. Parts 1-4. By A. G. Butler. Janson.

A Synonymic Catalogue of Diurnal Lepidoptera. By W. F. Kirby. Van Voorst, 1871.

Catalog der Lepidopteren des Europäischen Faunengebiets. Von Dr. O. Staudinger und Dr. M. Wocke. Dresden: 1871.

We have here strung together several recently published works upon the beautiful insects constituting the order Lepidoptera, commonly known under the names of butterflies and moths, with the view of calling attention to the wonderful increase in our knowledge of those tribes which has been made during the last quarter of a century. Looking still further back, we remember the time when exotic Lepidoptera were almost entirely neglected by our entomologists. The great collectors of the last century, especially Drury and Francilone, had passed away, and Mr. Haworth's collection may be said to have been the sole accessible private depository of the traditions which Fabricius had left behind him. McLeay's famous collection was locked up, and it was in Mr. Haworth's cabinet that we were able to find references to the wonderful volumes (seven in number) of drawings of exotic butterflies made during the last quarter of the eighteenth century by Mr. Jones, so constantly referred to by Fabricius, from which, indeed, from time to time, Donovan professed to publish copies of rare species only to be found represented in those delineations. After the death of Samouelle, Edward Doubleday was appointed one of the entomological assistants at the British Museum, and his strong bias for Lepidoptera led to the arrangement and increase of the national collection in a very marked degree, whilst the publication of the fine work on the genera of diurnal Lepidoptera which he commenced, the plates of which were drawn by Mr. Hewitson, extended the taste for these beautiful objects far and wide, which has been further fostered by the publication by the latter of these gentlemen of a series of volumes, of which the title is given at the head of our list, containing most admirable representations of new exotic species. Hence, at the present day, the number of amateurs of exotic butterflies is so greatly increased that many collectors have been despatched to different quarters of the globe to search for specimens. The gigantic collections formed on the Amazons by Mr. Bates and in the Malayan Archipelago by Mr. Wallace have also contributed to swell the lists to a great extent; but still so endless are the productions of nature that even within the last two or three years Mr. Buckley, after less than a twelve months' visit to the eastern slopes of the northern portion of the Andes, brought home a collection of butterflies in which from 150 to 200 new species were contained, most of which have been described by Mr. Hewitson in the second work on our list. In like manner a collection of butterflies, amounting in number to about 50,000 specimens, has recently arrived from Costa Rica, formed by Dr. van Patten, containing about 50 new species, of which the descriptions have been partially published by Mr. Butler in his little periodical work, the *Cistula Entomologica*; the same author having also contributed materially to our knowledge of new exotic species by his work *Lepidoptera Exotica*, in which figures are given which, considering that they are printed in chromo-lithography, in many instances give very characteristic representations of the various objects they are intended to delineate. Many other entomologists, both at home and abroad, are engaged in the

delineation and description of new species, both British and exotic, of butterflies and moths, so that scarcely a periodical devoted to zoological subjects now appears without containing fresh materials towards our knowledge of these tribes.

The fifth work on our list has been already (although too shortly) noticed in our pages. It is a most carefully compiled catalogue of all the species of butterflies of which descriptions had been published almost to the date of its own appearance. It consequently contains the most recent summary of the diurnal portion of the order, being confined to the butterflies, of which it enumerates 7,700 species, not including many named varieties which have been considered as distinct by different authors. In the British islands we possess only 66 species of butterflies; but in Staudinger and Wocke's catalogue (the sixth work on our list) we find that the number of species of butterflies belonging to the European fauna amounts to 456, whilst the number of nocturnal Lepidoptera or moths amounts to about 2800. In this work these authors consider it to be "une erreur, conduisant même à des conséquences absolument fausses, de prendre les limites de la géographie politique pour cadre quand on veut considérer un certain ensemble en histoire naturelle." Their catalogue consequently contains species found in a great part of the north of Asia as well as the Holy Land and north of Persia, and also the mountainous regions of the north-west of Africa, and the Madeira and Canary islands; but it is in the tropical and subtropical regions, especially of the New World, that the great mass of diurnal Lepidoptera is found.

The great additions to our collections of exotic species to which we have already alluded have made us acquainted with the peculiar fact, that certain species common and quite uniform in their appearance and characters in certain given localities, are found in a slightly modified, but persistent, form in other regions, and this peculiarity has given rise to great uncertainty in the nomenclature of the species, some authors contending that these local forms are to be treated as absolutely distinct, whilst others maintain them to be only varieties of the previously known types or races. Let us take, for instance, the gigantic types of the sub-order which, from their size, have well been named *Ornithopterus* (bird-winged), and which are natives of the East; of these we find *Papilio Priamus* made up in Mr. Kirby's catalogue of not fewer than seventeen local forms, which have been named *Priamus*, Linn.; *Panthis*, Linn.; *Richmondia*, Gray; *Cassandra*, Scott; *Euphorion*, Gray; *Pronomus*, Gray; *Poseidon*, Doubleday; *Cronius*, Felder; *Boisduvalii*, Montrouz.; *Oceanus*, Felder; *Arruana*, Felder; *Urvilliana*, Guérin; *Triton*, Felder; *Pegasus*, Felder; *Archideus*, Felder; *Lydias*, Felder; and *Croesus*, Wallace. (The last-named insect is the one which is described by Mr. Wallace in his *Travels* as having so greatly excited him when he first observed it—and which was sold at 10*l.* per pair when first received in England—that it threw him into a fever for several days.) There is also in India and the adjacent districts and islands a series of very elegant butterflies, of which *Pap. Paris* is the type, distinguished by having their wings powdered with golden-green atoms; they in like manner exhibit permanent variations of no higher specific rank than those of the *Priamus* group in their respective districts, and yet we find each of them in Mr. Kirby's catalogue given as distinct species. So, again, looking at the genus *Papilio* in Staudinger and Wocke's catalogue, consisting only of seven species, we find *Papilio Xuthulus* of Bremer given as a variety of *P. Xuthus* in the text, but in the appendix we are told "bona est species, sec. Felder," whilst the Syrian *P. virgatus* of Butler is doubtfully considered as a variety of *P. Podalirius*.

This diversity of opinion, leading, as may easily be conceived, to endless disputes as to the specific names to be given to this or that presumed species or geographical variety, or sub-species or race, as it has been variously called, may at first sight appear of a trifling character, but very little reflection will show that it involves problems of very wide application, amongst which the modification of form, the evolution of species, and even the question of the unity of the human race, may be mentioned.

"Von viel grösserer Bedeutung sind die Localvarietäten oder Racen, von mir mit *v.* (varietas) bezeichnet. Manche derselben werden sogar als eigene Arten betrachtet, und lässt sich hierüber gar nicht streiten, da dies ganz von den mehr oder minder *Darwinistischen* Ansichten des Einzelnen abhängt."*

Hence it may be safely inferred that the careful investigation of the extent of variation exhibited by the individuals of these sub-species, the modes in which they differ, *inter se*, the possibility of their effecting prolific breeds when crossed together, and other such enquiries, upon the spot where the insects occur, must be made before we can arrive at a satisfactory conclusion (even if then) as to the extent and limits of each species. In the meantime it may be suggested not only that, until such result has been obtained, each clearly distinct local and permanent variety should be named, but that, wherever possible, names should be given which should indicate in some way or other the connection of the local form with the type of the species. This has, indeed, been partially attempted by using prefixes, as in the case of *Charaxes Jasius* and *Epijasius*, or identical terminations, as in *Papilio Protesilaus*, *Autosilaus*, *Agesilaus*, *Macrosilaus*, *Telesilaus*, *Penthesilaus*, &c., or by forming anagrams from the name of the type species.

And this brings us to the consideration of another difficulty which threatens, at the present day, to become a very serious stumbling block in the way of science, namely, the perpetual change in the names, not only generic (as might more reasonably be expected), but also specific, even in the case of species well defined and universally admitted as such. The binomial system of nomenclature, introduced by Linnaeus, is now adopted throughout the animal and vegetable kingdom by nearly every naturalist, and the rule recognised is that the first name given (with a satisfactory description) to a species shall thenceforth be its permanent designation. Now this at first sight seems to be a very simple rule, but its working is not so. For instance, a description of an insect may be a very good one, taken, however, from an extreme variety, and which, not agreeing with the ordinary type of the species, has misled a subsequent writer into describing the type under a different name; when, however, the previous description of an accidental variety is found, it is immediately said that it must supersede the latter. So, when a description is found in some obscure work of a species which has for half a century or more been universally known under a name published subsequently by some well known writer, we are now told that we must take up the first name, and in this manner the nomenclature of the science is perpetually shifting. As examples: the two common European swallow-tailed butterflies of Europe are known throughout the scientific world under the names of *Papilio Machaon* and *Podalirius*, but Rennie, having discovered that Retzius (as he fancied, previous to Linnaeus), had given to the former the name of *Papilio Reginae*, resuscitated the latter name, whilst even Staudinger and Wocke in their catalogue before us have given the name of *Papilio Sinon* to *P. Podalirius*, Poda in 1761 having described it under the former name, before Linnaeus first gave it, as they thought,

* Staudinger, pref. p. xxii.

in 1763, the latter. This is a striking instance of this system of *resurrection*, as it has been termed, holding, as the species does in their system, the conspicuous position of the head of the whole of the Lepidoptera. Mr. Kirby, who has adopted this system of hunting out old names to a greater extent than any previous author, quotes these dates (or rather he quotes Linnaeus under the year 1764), and consequently he ought to have given *Podalirius* under the name of *Sinon*, which he has not done, and ludicrously enough Staudinger and Wocke subsequently discovered that Linnaeus in fact employed the name of *Podalirius* in the 10th edition of the *Systema Naturae* in 1758, and have, consequently, in their appendix been obliged to restore the latter name. Now the use of names is but supplementary to a knowledge of the objects designated, and although it may be true that "Nomina si periant, perit et cognitio rerum," the laws of nomenclature have their limits as well as the laws of any other kind of property, and as undisturbed possession of an estate for a certain number of years is held to bar all previous claimants so I do not hesitate in suggesting that, where a name has been universally adopted for a species for a certain number of years (say 25), no previous name may be restored. In fact, in such case I entirely agree with the dictum quoted by Mr. Lewes, that "Communis error facit jus."

I. O. WESTWOOD.

Scientific Notes.

Physiology.

The Action of Galvanic Currents on Nerve and Muscle.—Professor L. Hermann contributes a long paper on this subject to the 6th part of *Pflüger's Archiv*, in the course of which he shows that living muscle offers very much greater resistance to an electric current passing in a direction across the fibres than to one transmitted along them, the average difference being as 7:1. In muscles which have passed into the condition of *rigor mortis*, this difference almost entirely disappears. In living muscle the specific resistance in the longitudinal direction (taking that offered by mercury as unity) is about 2,330,000, and in the transverse direction about 15,134,000. A similar difference in the amount of resistance offered to the passage of a current in these directions is noticed in the case of the nerves, the ratio here however being somewhat less, namely about 5:1. The absolute specific resistance of nerve in the longitudinal direction is 2,554,000, and in the transverse direction 12,586,000, that of mercury being taken as 1. The longitudinal resistance of the nerve is augmented by heating it to 50° C. (122° Fahr.), the transverse resistance simultaneously diminishing. At the boiling temperature, however, the longitudinal resistance rises to that possessed by the living nerve. Professor Hermann connects these differences in the resistances offered by the longitudinal and transverse section of the nerves with the different polarizability of the sheath and nucleus of the fibres, and gives numerous and elaborate mathematical formulæ bearing upon the subject. He also describes a new universal commutator.

The Relation of Uric Acid to Muscular Action.—M. A. Sawicki gives the details of a series of experiments on man, which show that the quantity of the acids excreted by the kidneys depends to a far greater extent upon the quantity and quality of the food ingested than upon the amount of exercise taken (*Pflüger's Archiv*, part vi.).

The Vagus, the Sensory Nerve of the Heart.—K. Gurboki (*Pflüger's Archiv*, part vi.) shows that in the frog the vagus is the sensory nerve of the heart, by the following experiment:—The vessels of one or both lower extremities of a frog are first ligatured, and the animal is then poisoned with woorara, the thorax and pericardium are opened, and the posterior surface of the auricle irritated with a sponge dipped in acetic or, still better, in sulphuric acid. Each time that the spot in question is irritated, reflex contractions occur in the posterior extremities. If, however, the vagi have been divided, no contraction occurs, showing that these nerves constitute the paths along which the sensory impulses exciting the contractions are transmitted.

Peripheral Distribution of Non-Medullated Nerve-Fibres.—Dr. Klein, of the Brown Institution, continues the publication of his researches on this subject in the April number of the *Quarterly Journal of Microscopical Science*. He calls in question the correctness of Dr. Beale's statements regarding the "ultimate nerve-fibres," maintaining that such fibres correspond to the *coarser* non-medullated fibres, which are rendered visible by the mode of preparation that he, Dr. Klein, has

employed. From this *coarser* plexus spring a number of finer nerve-fibres, still provided at rare intervals with nuclei, forming a rather dense plexus, that in the case of the arteries resembles a perivascular sheath. From these fibres, again, still finer ones may be traced, which no longer exhibit nuclei, and enter the wall of the vessel itself.

Histology of the Nerves.—M. Ranvier, in a paper in Brown-Séguard's *Archives de Physiologie*, describes a peculiar feature in the microscopical character of the nerves, which, he says, has hitherto been entirely overlooked, or has only been very imperfectly recognised. On examining very fresh nerves, he finds that they present a series of annular constrictions placed at regular distances about a millimetre apart. As it is almost impossible to tease out perfectly fresh nerves into thin constituent fibres, he macerates them for a very short time in picrocarmine of ammonia, osmic acid, or nitrate of silver; the cylinder-axis of the nerves becomes stained with picrocarmine of ammonia or nitrate of silver, whilst the white substance of Schwann remains uncoloured. When a nerve-fibre is exposed to the action of these agents, it becomes stained at each constriction, showing that the white substance of Schwann is absent at these points. With perosmic acid, on the contrary, the white substance of Schwann blackens, whilst the cylinder-axis remains for a time unchanged: a nerve-fibre macerated in this acid exhibits a clear part at each constriction, but is blackened elsewhere, giving therefore confirmatory evidence that the white substance is not present at these points. It appears, then, that the nerve is divided into a series of segments by the presence of regularly disposed constrictions, and that at these constrictions the sheath of Schwann is either absent or reduced to an extremely thin layer, the cylinder-axis coming into proximity, if not immediate contact, with the external sheath. A small mass of protoplasm or nucleus is found at some point along the length of each internode, and usually at an equal distance between two adjacent constrictions. This has led M. Ranvier to suggest that each node was originally a cell, and that the fibres are composed of nerve-cells placed end to end and attached to one another by a thin cementing layer.

The Nerves of Taste.—M. Lussana, in the journal where the foregoing observations occur, contributes a paper on the nerves of taste, in which he shows, from pathological cases, that the sense of taste in the forepart of the tongue is not derived, as has always been supposed, from the fifth nerve, since the branches of this nerve may be entirely paralysed, and yet the taste be perfectly preserved. He likewise refers to cases in which the taste was entirely lost, while the sensitiveness to tactile impressions was undiminished in all the parts supplied by the fifth nerve; on the other hand, the sense of taste in the forepart of the tongue is lost after section of the facial nerve near its origin. M. Lussana therefore considers that the gustatory nerves of this part are due to the fibres from the facial contained in the *chorda tympani* which joins the gustatory branch of the fifth nerve, and not to the fifth itself.

Transversely Striated Muscular Tissue in Acari.—J. H. L. Flögel states that he has been able to determine the presence of transversely striated muscle in a species of *Trombidium*, by placing the whole animal for an hour or two in a one per cent. solution of perosmic acid, washing it in water, and then dissecting it in a very weak solution of glycerine. The transverse striae are very wide apart; each fibre appears to be composed of a semifluid substance, which remains uncoloured in perosmic acid, and is filled with denser columns, the fibrils.

Germination of Cryptococcus.—Hallier complains, in the last part of his *Zeitschrift für Parasitenkunde*, of the unreasoning opposition that has been offered to his views on the germination of the lowest forms of fungi. His present paper is devoted to the proof of the capability of germination of cryptococcus, and he considers the following propositions to have been satisfactorily demonstrated. 1. The yeast of beer germinates whenever it is placed under favourable conditions. 2. As long as the germ-tubes and their branches grow in a moist place, rod-like germ-cells are constricted off at their extremities. 3. Beer-yeast consequently belongs to the mould fungi (*Schimmelpilze*), of which it constitutes a one-celled form, and is in no way connected with the *Ascomycetae* of Reess, on which point Dr. Reess has fallen into an error, pardonable enough considering the difficulty of the investigation. 4. Smut (*Ustilago carbo*, Tulane), when its germ-tube grows in spots moistened with distilled water, behaves itself exactly like the germ-tube of yeast, that is, rod-like cells are constricted off from the extremity of every fibre. 5. The parasite found in the urine of typhus patients, when placed in a nitrogenized solution of sugar and other fluids capable of undergoing fermentation, buds like cryptococcus, and increases in the same manner. 6. Moreover, cryptococcus cells germinate under favourable conditions, and their germs comport themselves like beer-yeast when placed on a moist bed. 7. The germ-cells of Haubner's skin-fungus of the horse behave like those of yeast under similar conditions, that is, in fermentable fluids they develop cryptococcus-cells, which, under favourable circumstances, germinate and constrict off elongated cells from the ends of the fibres.

On Epilepsy artificially produced.—It is well known that M. Brown-Séguard has performed experiments which prove that by sec-

tion of certain columns of the spinal cord of the guinea-pig, and of certain of its nerves, as the sciatic, zones or regions of the skin are so affected that on causing an irritation of these parts by pinching or pricking the animal is thrown into an epileptiform state. These experiments have lately been repeated and varied by M. Westphal, who finds that a slight tap on the head of a guinea-pig causes an attack of epilepsy either immediately or after the lapse of a minute. The blow, it should be mentioned, must not be a severe one, or the animal will die, either with or without convulsions, from arrest of the respiratory movements, the heart continuing to beat for some minutes. After a little time an epileptogenic zone is developed on the head. The duration of the epilepsy thus produced is from six weeks to six months. The two young ones of a female thus rendered epileptic also presented a zone the excitation of which was followed by epileptic attacks. If the skin of the head is divided, and the exposed bone percussed, an immediate attack is the result; the attacks therefore are not occasioned by any irritation or excitation of the integuments. M. Westphal attaches much importance, in a pathogenic point of view, to the little hæmorrhages that occur in the white substance of the *medulla oblongata* and of the spinal cord, especially to the latter, because, according to Brown-Séquard, lesions of the cervical portion of the spinal cord are always followed by epilepsy in the guinea-pig, while lesions of the *medulla oblongata* do not produce this disease in such animals as survive the injury. At the conclusion of his work, M. Westphal mentions two cases of non-traumatic epilepsy in men in whom an epileptiform zone was formed. (Brown-Séquard's *Archives de Physiologie*, March 1872.)

Geology.

The Geology of East Greenland between 73° and 76° Northern Latitude.—The valuable collections of rocks and fossils brought home by the German Polar Expedition of 1870 have been examined by F. Toulou and Dr. Lenz, of Vienna, who have just published their report (*Verh. der geol. Reichsanstalt*, No. 4, 1872, p. 71). It appears that that portion of the continent of Greenland lying between 73° and 76° 30' is formed of crystalline rocks; the islands along the coast consist in part only of the primary rocks, being covered in places with others of the Mesozoic or Cainozoic period. Some of these islands, like Shannon, are in part only of volcanic origin; the majority, however, Pendulum and Sabine islands, for instance, are chiefly composed of dolerites, anesites, and basalt-tuffs. The basalt stretches from N.E. to S.W., begins at Shannon, and, crossing Pendulum and Sabine islands, forms the important peninsula between False Bay and Tyrol Fjord, traverses Jackson Island, and proceeds thence to the east coast of Greenland. The basalt covers vast areas, but real eruption cones are nowhere observed. The anesite exhibits the characteristic columnar structure. Miocene beds are met with in several districts; between the southernmost point of Hochstetter promontory and Cape Seebach it forms a low hilly country, at the base of a ridge of crystalline rocks, and consists of a yellow sandstone with casts of a *Cytherea*-like bivalve; on the south-eastern side of Sabine Island it occurs as quartzose sandstone with *Taxodium distichum miocenium*, *Populus arctica*, and *Diospyros brachysepala*. These beds evidently belong to the same horizon as the Miocene strata of Western Greenland, Iceland, and Spitzbergen. The Miocene beds between Cape Albrecht and Cape Borlace Warren contain lignite. Mesozoic rocks are met with on the eastern and southern shores of Kuhn Island; the Jurassic deposits of this locality are composed partly of marls and sandstones, and greatly resemble those in Russia. The coarse sandstones and breccias of the southern shores of the island, which contain coal, belong to the middle Dogger (inferior oolite). The Jura of Kuhn Island rests on the crystalline rocks of a lofty mountain-ridge, which, capped with ice and snow, separates the two groups of Jurassic beds. The marl of the eastern portion of Kuhn Island is partly formed of the *Ancella concentrica*, Fisch., which characterizes the Russian Jura, as well as casts of *Cyprina*, three species of belemnites, and two of ammonites, all of which have allied forms in the Russian Jura. The Dogger beds (lower oolite) containing coal, on the south coast of Kuhn Island, perhaps belong to the same horizon as the coal-bearing Jura of Brora and of the islands of Mull and Skye; *Goniomya Vscripta*, Sow. sp., a *Myacites modiola*, *Avicula Munsteri*, Gdf. sp., were obtained from this deposit. The occurrence of Rhaetic beds on the south coast of False Bay is of very great interest; they were identified by *Rhynchonella fissicostata*, Suess, and other characteristic fossils. Palæozoic rocks are in all probability represented by a series of red, brown, bluish, and greenish calcareous shales and veined limestones on the north side of the Kaiser Francis Josef Fjord. Among the more prominent of the crystalline rocks are various kinds of gneiss, at several places showing stratification. Another deposit worthy of notice is a dolomite with traces of graphite, which occurs in gneiss in False Bay.

The Purbeck Beds of Southern France.—At a recent meeting of the Société géologique de France, M. Hébert stated that in the Mediterranean Jura of France, between Grenoble and Yenne, in Savoy,

M. Lory had found vast deposits of limestone, overlying the white limestone with *Terebratula moravica*, which contain freshwater deposits exhibiting the characters of the Purbeck beds. This confirms what Zittel said some time ago, that the Purbeck beds and the upper Tithonian were formed during the same epoch.

The Origin of the Wealden Formation.—At the meeting of the Geological Society of London, held on the 20th March, Mr. C. J. A. Meyer directed attention to the probable origin of the Wealden beds of the south-east of England. He doubted the correctness of the view which derives them from the delta of a single river, regards them as a fluvio-lacustrine rather than a fluvio-marine deposit, and attributes their accumulation to the combined effect of several rivers flowing into a wide but shallow lake or inland sea. The evidence adduced in favour of this theory is mainly as follows: the quiet deposition of most of the sedimentary strata, the almost total absence of shingle, the prevalence of such species of Mollusca as live in nearly quiet waters, the comparative absence of broken shells such as usually abound in tidal rivers, and the total absence of drift wood perforated by Mollusca in either the Purbeck or Wealden strata.

The Habitat of Brachiopoda in Former Epochs.—J. Fuchs, of Vienna, in the columns of the *Verhandl. der k. k. geol. Reichsanstalt*. (No. 6, p. 1), calls attention to the fact that, contrary to the habits of existing kinds of Brachiopoda, now found at great depths, the extinct species of former epochs lived on shallows and shores. He illustrates this remarkable fact in the Pliocene of Sicily and Calabria, consisting of two deposits, a chalky marl with an abundant fauna, identical with the present Mediterranean fauna, and a littoral deposit with oysters, *Pecten*, *Balanus*, &c., as well as enormous numbers of Brachiopoda, which are collected in vast banks, and which are entirely wanting in the deep-sea deposit. The same phenomenon is observed in the basin of Vienna, where the large *Terebratula* occurs, not in the deep-sea deposits, but invariably in the littoral zone, associated with *Balanus*, *Patella*, *Clypeaster*, &c.; the same feature presents itself in the Crag of England and the Tertiary of Doberg, near Bünde. Deposits of Mesozoic and Palæozoic periods no less strikingly illustrate this fact. We may mention the Brachiopoda deposits of the Quader sandstone, the Stramberg coralline limestone, the Nattheim coral Rag, the middle Lias of Fontains-Étoupefour, the Hierlatz beds, and the Cassian bed, and, among the Palæozoic rocks, the *Stringocephalus* limestone, Wenlock rocks, &c. In all these strata we find Brachiopoda associated with large corals, bivalves with thick shells, and phytophagous Gasteropoda, and rarely, if ever, do we meet with them in the deep-sea deposits of these formations.

Age of the Rock-Salt and Sulphur Deposits of Sicily.—By the researches of S. Matura (*Memorie per servire alla descrizione della carta geologica d'Italia*, publ. del R. Comitato geologico del Regno, vol. i. p. 53, 1871) it appears that these beds belong to two different horizons, the first being most probably of Oligocene age ("Miocene inferiore" of the author), and the latter belonging to the true Miocene. It is, moreover, probable that the marine deposits of the Miocene were separated into two portions by a freshwater deposit and a stratum bearing gypsum and sulphur.

Corundum of North Carolina.—Corundum has long been known to occur in Franklin Macon Co., N. C., in large loose masses. Through the energy of Colonel C. W. Jenks the masses have been traced to their source in veins in the Blue Ridge about 2500 feet above the sea-level. The chief vein, four feet in width, is made up of crystalline masses or isolated crystals of corundum, of a fine blue, greyish-white, or red colour, mixed more or less with the crystallized chlorite occurring with it. (*Am. Jour. Sc.* April, p. 301.)

Two New Ornithosaurians from the Cretaceous of Kansas.—In the *American Philosophical Society's Journal* for March, D. Cope describes two new species of Ornithosaurian, which resemble in their vast dimensions the pterodactyles of the English chalk and greensand. The specimens consist chiefly of portions of the anterior limb, of metacarpals and phalanges. Some of the phalanges of the claw-bearing digits are remarkable for their comparatively large diameter, a peculiarity stated by Seeley to characterize the species of his genus *Ornithochirus*.

The Cretaceous Fishes of Kansas.—The same author, in the January number of the above journal, gives a list of all the fishes of the Cretaceous period of Kansas, which shows the remarkable synchronism existing between the chalk formations of Kansas and England. Out of twenty-five genera of fishes only three are peculiar to Kansas.

A New Fossil Butterfly.—According to the *American Naturalist* for March 1872, p. 179, S. H. Scudder has discovered a new species (and genus) of butterfly from Aix. It is preserved in the Marseilles Museum, and has been named *Satyrites Reynesi*, after the director. The specimen mainly consists of the two fore-wings, the venation of which is very perfectly preserved. Though nearest to the East Indian *Debis*, it has the form and general appearance of *Portlandia*.

A Giant Trilobite.—At a recent meeting of the Geological Society of France (*Revue scientifique*, March 30, 1872) M. Bayan showed a trilo-

bite from Angers, which has a length of not less than from 70 to 80 centimetres, or a size nearly double that of the largest known specimens. M. Bayan believes it to be allied to the genus *Lichas* and the species *L. Heberti*.

Chemistry.

Oxidation of Gases with Chromic Acid.—E. Ludwig (*Ann. der Chem.*, April 1872, 47) has published the results of his investigation of the oxidizing action of this acid of some of the gases. The gas to be examined was collected in a eudiometer over mercury, and the concentrated acid introduced in a ball of dried plaster of Paris. Carbonic oxide is converted at ordinary temperatures into carbonic acid, and can subsequently be determined by absorption with potash; the author suggests the employment of this reaction for the detection of carbonic oxide in gaseous mixtures. 20 cc. of the oxide were converted into acid in from eight to ten hours at ordinary temperatures, and in three hours at 35° C. Hydrogen will take oxygen from chromic acid: 35·8 cc. of this gas in contact with the acid were reduced to 16·5 cc. in forty hours at 17° C., and in eighty-six hours had been completely converted into water. Marsh-gas undergoes no change, not a trace of carbonic acid being detected in it after a week's exposure to the concentrated acid. Chapman and Thorp have previously shown that at higher temperatures chromic acid converts ethylene into carbonic acid and water; at ordinary temperatures, however, formic and probably acetic acid are also produced. When the reaction is complete, the gas will have expanded one-third of its bulk, and be found to consist of carbonic acid only. Had all the carbon of the ethylene been oxidized to carbonic acid, the volume of the gas would have been doubled.

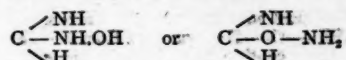
Conversion of Albuminoids into Urea by Potassium Permanganate.—The accuracy of the results of Béchamp's observations on this question having recently been doubted, E. Ritter (*Comp. rend.* 73, 1219) repeated Béchamp's experiments, and has arrived at the same conclusions as that observer. Albumen, fibrin, and gluten were in part converted into urea; 30 grammes of albumen gave 0·09 gramme of urea, the same amount of fibrin only 0·07 gramme; while the like quantity of gluten furnished about 0·3 gramme; in the last case Ritter observed a second crystallized product, which he is now investigating. During these operations of oxidation a moment arrives when heat should be applied and permanganate added with great caution, lest the reaction go too far.

Conversion of Cane Sugar into Grape Sugar by the Action of Light.—Early last year E. M. Raoult (*Compt. rend.* 73, 1049) placed equal volumes of a solution of 10 grammes of white cane sugar in 50 grammes of water in two tubes, which were sealed after their contents had been boiled for a short time. They were both exposed to the same temperature for five months, one in darkness, the other in the light. At the end of this period both solutions were perfectly clear and free from germs; the contents of the former tube gave no turbidity with alkaline copper solution, the liquid in the latter a strong reaction, one half the sugar having been changed into glucose.

Bytownite.—An examination of some microscopic sections of this compact non-crystalline substance has convinced F. Zirkel (*Mineral. Mittheil.* No. 2, 61) that it can no longer be regarded as a distinct member of the felspars. Though presenting to the eye the appearance of homogeneous structure, he finds it made up of four distinct minerals: a triclinic felspar, the crystals of which are sometimes $\frac{1}{2}$ mm. in length, tufts of crystals of hornblende of various shades of green, granules of quartz and of magnetite. The structure throughout is micro-granitic, without a trace of matrix not identical with one or other of these minerals. Bytownite has a constitution similar to that of the kugeldiorite of Corsica, and accords in chemical composition in a remarkable way with it, as well as with a so-called anorthite-augitic rock from Carlingford. All these agree in a low percentage of silica and alkalies, a large proportion of lime, and very large amount of alumina. The microscope, however, has shown that bytownite is not a mineral species, but a mixed crypto-crystalline rock, which will have to be excluded from the classification of the felspars proposed by Tschermak, who placed it between labradorite and anorthite.

Isureline, a Base Isomerio with Urea.—A paper by W. Lossen and P. Schifferdecker, on the mode of formation and chemical characters of isureline, is published in *Zeitsch. der Chem.* vii, 594. This base is produced when an alcoholic solution of hydroxylamine is left in contact with strong hydrocyanic acid for two days. The mixture is then evaporated at about 30° to 40° C. and allowed to cool, when isureline separates in large crystals that can be recrystallized from moderately warm spirit. 190 grammes of hydroxylamine nitrate gave about 60 grammes of isureline, or half the theoretical amount. During the preparation of its salts, of which the hydrochlorate, sulphate, picrate, and others, have been minutely studied, the temperatures of the solutions had to be kept as low as possible, to prevent decomposition and formation of ammonia salts. When heated alone, it decomposes with energy, yielding ammonium carbonate and ammeline. Hot water also destroys it, urea and

biuret being among the products of the action. The authors are as yet unable to assign a rational formula to their new base; they conclude, however, from the rapidity of its decomposition at higher temperatures, as well as from the readiness with which it colours iron chloride and reduces silver solutions, that isureline is still a derivative of hydroxylamine. Should this be the case, they give a preference to the following formulae:—



The Changes in Colour of Manganese Chloride.—The chloride of this metal, when in solution, develops hues as varied as its oxides do. According to F. W. Krecke (*Journal für prakt. Chem.* 1872, 106), a solution of the rose-coloured crystals in from ten to twelve pints of water, is, whether cold or boiling, devoid of colour; when evaporated, it becomes bright red, the tint increasing in depth with the concentration of the liquid. During evaporations at temperatures above 70° the redness attains its greatest intensity when the liquid contains 15 per cent. of salt. With further concentration an orange tint makes its appearance, and as soon as 20 per cent. of salt are contained in the solution, it becomes of a bright yellow, resembling that of weak potassium chromate. If it now became cold, the yellow changes to the original rose colour. Analysis demonstrated that by the original change from rose to yellow no combined acid was evolved, the yellow solution having the composition indicated by the formula $\text{MnCl}_2 + 28\text{H}_2\text{O}$. Further evaporation between 70° and 100° C. develops a green colour, which finally rivals that of a strong solution of a nickel salt; this again on cooling changes to yellow, and eventually recovers its rosy tint. Here, it appears, a little acid, about 1·6 per cent., is liberated, the decomposition beginning when the solution contains 36·9 per cent. of manganese chloride, and possesses a composition represented by the formula $\text{MnCl}_2 + 12\text{H}_2\text{O}$. The green colour is not a result of the loss of acid, but is due, the author observes, to the presence of anhydrous chloride in the solution.

Chemical Constitution of the Leaves of *Ampelopsis hederacea*.—The leaves of the Virginian Creeper are known to give a very strong acid reaction, but beyond the determination of the presence of tartaric acid in them by Wittstein very little is known of their chemical characters. They have recently been examined by E. von Gorup-Besanez (*Ann. der Chem.* 1872, parts 2 and 3, 225). In leaves gathered in June he found acid potassium tartrate, neutral calcium tartrate, and calcium sulphate, gum and sugar, probably a mixture of levulose and dextrose. The ash contained 24·6 per cent. of potash, 34·4 per cent. of lime, 8 of phosphate of iron, and 5·8 of phosphoric acid. Other leaves, gathered in September, had a somewhat different composition. Though the crystals deposited from their extract were found to be calcium tartrate only, the liquid contains pyrocatechin (oxyphenic acid), and the lime salts of malic and glycolic acid. *Vitis vinifera* is the only other plant in which the latter acid has yet been found. As Hoppe-Seyler has shown that pyrocatechin is formed when carbon hydrates are heated with water under great pressure, as well as by treating them with acids, the discovery of this substance in the living plant is not without interest to the physiological chemist.

Devitrification.—Benrath attributes the many failures which have attended enquiries into the change that glass undergoes by long exposure to the temperature at which it becomes soft to the imperfect removal of the unchanged glass from the crystals that were examined. He finds (*Der Naturforscher*, 1872, No. 9, 70) that hydrofluoric acid acts more easily on transparent than devitrified glass, and has used this reagent to separate them. A comparison of the composition of a specimen of plate-glass before and after etching showed that, though the percentage of silica in the residue had but slightly changed, that of lime had considerably increased. A specimen of the same glass, after devitrification and treatment with hydrofluoric acid, lost but little of its lime, while the percentage of silica had increased 8·6 per cent. The author assumed therefore that devitrification consists in the separation of more acid and consequently denser silicates from the melted glass. To test this, a very acid glass of the formula $\text{NaO}, \text{CaO}, 8\text{SiO}_2$ was prepared, and readily devitrified. When cold, its mass was chiefly made up of small spherular bodies, from which the less abundant transparent portions could easily be detached. The former by the above treatment yielded crystallized silicic acid. The separation of silica in this form, as well as that of felspar, was also observed in basic devitrified glasses. The author regards this modified glass, not as a mixture of several silicates having three or four equivalents of acid, but as a solution of silicic acid in a glass, probably of the composition $\text{RO}, 2\text{SiO}_2$.

Physics.

The Heat-Spectra of the Sun and Lime-Light.—The discontinuity of the solar heat-spectrum was first determined by Sir John Herschel, who with a flint-glass prism threw a spectrum on paper blackened with soot and moistened with alcohol, and estimated the

thermal effect of the spectrum by the time of drying. He observed that the moistened surface dried in a series of four distinct spots. Fizeau and Foucault also noticed the existence of bands in the ultra-red rays; later observers, however, who have investigated the distribution of heat in the solar spectrum delineate the heat-curve as continuous. M. Lamansky (*Phil. Mag.* April, 1872, from *Monatsberichte Akad. Wiss. Berlin*), during his experiments on this subject, noticed that, beginning from the line D and advancing towards the ultra-red end of the spectrum, the deflections of the galvanometer, corresponding with the heat-effects, become, though not proportionately, stronger until they attain a certain maximum and then diminish; this takes place four times, and shows that the ultra-red rays are interrupted in three places by breaks or bands. These bands have a corresponding position in spectra produced either by a glass, bisulphide of carbon, or rock-salt prism, and differ only in becoming broader when the prism used has a greater dispersive power. The breaks or bands are not equally wide; the first is much more sharply separated from the second than the second from the third. Parallel experiments with rock-salt apparatus—made the one in the morning and the other about noon—show that the breaks become somewhat narrower with increasing altitude of the sun. They were also rather deeper on the days when the relative moisture of the air was greater. M. Lamansky does not consider the observations sufficient to warrant our ascribing these bands to atmospheric absorption. In all the experiments it was observed that the heat-effect of the solar spectrum after attaining its last maximum sinks suddenly. A similar examination of the lime-light spectrum showed that there was no break of continuity as in the solar spectrum, and that the position of maximum heat-effect is much farther from the end of the visible red in the former than in the latter. In other words, with the feebler sources of heat the intensity of heat-effect attains its maximum for rays of greater wave-length than is the case with more powerful sources of heat.

Absorption-Spectra of Gases and Vapours.—M. Gernez (*Comp. rend.* 1872, Nos. 10 and 12) finds that all more or less coloured gases are capable of yielding absorption-spectra if only a sufficient thickness be examined. For this purpose he encloses the gas in a long tube terminated with parallel glass plates, and transmits a ray of light from a Drummond lamp along the axis of the tube, the ray on emerging being examined by the spectroscope. In this way the spectrum of chlorine, enclosed in a tube 468 decims. in length, exhibits a number of fine lines that commence a little beyond D and extend nearly to the violet, which is entirely absorbed. Chloride of iodine, in a thickness of 30 centims., furnishes a spectrum very different from that of chlorine, but analogous to those of bromine and iodine. Sulphur vapour was examined by heating sulphur in a porcelain tube 50 centims. long, closed by parallel glass plates. As soon as the sulphur vaporises, it produces a gradual extinction of the spectrum, commencing in the violet and extending to the red, no lines being visible. On continuing the heating, however, the vapour begins to allow other rays than the red to pass, and as the yellow, green, blue, and violet portions of the spectrum reappear, a series of lines commencing in the violet and extending to the green become visible. Selenious acid gives a system of absorption-lines lying chiefly in the violet and blue.

The Specific Heat of Carbon.—An important paper on this subject appears in the *Ber. der Deut. Chem. Gesell. zu Berlin*, of April 22, 1872, p. 303. It was held by Dulong and Petit, as a result of their experiments on twelve of the metals, that the product of the atomic weight and specific heat, in other words, the so-called atomic heat, had the same value, about 6.5, for all elements. Later observers have remarked striking departures from this law, and a comparison which H. F. Weber makes in the paper alluded to of the numbers obtained by Regnault, de la Rive, Kopp, and Wüllner, as representing the specific heat of carbon, clearly demonstrates that the different allotropic modifications of this element have very different specific heats, no one of which obeys Dulong and Petit's law, while the values assigned by these physicists to the specific heat of any one modification greatly differ. This he attributes to the fact that the specific heat of carbon in all its modifications varies with the temperature in a degree that would scarcely be supposed. By experimenting on two large diamonds he finds that the specific heat of carbon increases with the temperature to a degree surpassing any other substance, the specific heat of diamond being trebled by a rise of temperature from 0° to 200° C. The research was conducted in the physical laboratory of Prof. Helmholtz, in Berlin.

The Sun's Rotation.—The rate of the rotation of the sun has been measured by Zöllner and Vogel with the aid of Zöllner's reversion spectroscopie (*Revue scientifique*, March 30, 1872). The sun turns from west to east, his eastern edge moving towards the earth, the western from it. The rays emitted by the eastern edge ought, when examined with a prism, to be found to be more refrangible than those of the western edge. The displacement of F was carefully determined, and found to be about one-hundredth of the distance between the two sodium lines. This is a variation of refrangibility corresponding with a velocity at the solar equator of 2.59 kilometres per second.

On the night of the 15th–16th March, Prof. R. Luther, of Düsseldorf, observed another minor planet (288) Peitho. He gives the following data:—Düsseldorf mean time: 1872, March 15, 14h. 18m. 59.6s. R. A. in time: 12h. 7m. 26.73s. North Dec. +10° 17' 26.3". *La Revue scientifique* for April 15 records the discovery of two more planets, one, of the 11th magnitude, by M. Paul Henry, of Paris; the other, also of the 11th magnitude, by M. Borely, of Marseilles.

New Books.

- ANNUAIRE MÉTÉOROLOGIQUE de l'Observatoire de Paris pour l'an 1872. Paris: Gauthier-Villars.
- ANNUAIRE pour l'an 1872, publié par le Bureau des Longitudes. Avec des notices scientifiques. Paris: Gauthier-Villars.
- BAYLE, D. L'Electricité appliquée à l'art de la guerre. Le Mans: Monnoyer.
- BOWRING, Sir J. The Decimal System in Numbers, Coins, and Accounts. New Edition. Stanford.
- CHEVREUL, M. D'une erreur de raisonnement très-fréquente dans les sciences du ressort de la philosophie naturelle qui concernent le concret, expliquée par les dernier secrets de Chevreul. Paris: Firmin Didot.
- COHN, F. Die Entwicklung der Naturwissenschaft in den letzten fünf und zwanzig Jahren. Breslau: Kern.
- EICHWALD, E. v. Analecten aus der Palaeontologie und Zoologie Russlands. Leipzig: Voss.
- EICHWALD, E. v. Geognostisch-palaeontologische Bemerkungen über die Halbinsel Mangischlak und die Aleutischen Inseln. St. Petersburg: Buchdruckerei der K. Ak. der Wiss.
- FITTING, R. Das Wesen und die Ziele der chemischen Forschung und des chemischen Studiums. Leipzig: Quandt.
- HANKEL, W. G. Ueber die thermoelektrische Eigenschaften des Schwesphates. Leipzig: Hirzel.
- KÖLLICKER, A. Anatomisch-systematische Beschreibung der Alcyonarien. 1. Abtheilung: Die Pennatuliden. Frankfurt: Winter.
- KÖLLICKER, A. Morphologie und Entwicklungsgeschichte des Pennatulidenstammes, nebst allgemeinen Betrachtungen zur Descendenzlehre. Frankfurt: Winter.
- LAZARUS, M. Psychologischer Blick in unsere Zeit. Berlin: Dümmler.
- MANTEGAZZA, P. Quadri della natura umana. Milano: Bernardoni.
- MAUTHNER, L. Vorlesungen über die optischen Fehler des Auges. 1. Abtheilung. Wien: Braumüller.
- NICHOLSON, H. A. A Monograph of the British Graptolitraae. Blackwood.
- TRÉMEAU DE ROCHEBRUNE, A. Études préhistoriques, anthropologiques et archéologiques dans la Charente. Livr. 1. à 5. Paris: Savy.

History.

1. History of Greece from the Taking of Constantinople by the Turks to the Present Time. [*Geschichte Griechenlands von der Eroberung Konstantinopels durch die Türken im Jahre 1453 bis auf unsere Tage.*] Von Karl Mendelssohn-Bartholdy. I. 1870.
2. History of Italy from the Foundation of the Reigning Dynasties to the Present Time. [*Geschichte Italiens von der Gründung der regierenden Dynastien bis zur Gegenwart.*] Von Dr. Hermann Reuchlin. III. 1870.
3. History of Spain from the Outbreak of the French Revolution to the Present Time. [*Geschichte Spaniens vom Ausbruch der französischen Revolution bis auf unsere Tage.*] Von Hermann Baumgarten. III. 1871. Leipzig: Hirzel.

THIS valuable collection of separate works on the modern history of existing states, has been in continual progress ever since it was started about fourteen years ago. Each particular country being in the hands of an author, who either derives the knowledge of its institutions, or, perhaps, even his acquaintance with the leading statesmen from a personal residence, or from the most intimate connection with them—these works are likely to retain a permanent importance as specimens of conscientious contemporary historiography. Their bias is unquestionably on the side of progress. Yet, nevertheless, the principles of a sound scientific method prevail so far, that the losing side comes in for its full share of objective elucidation in the narrative.

The critical application of the sources, parliamentary and diplomatic, official documents and private letters, printed and manuscript materials, ought to be adhered to, on principle, with the same rigidity as if a period of ancient history were to be reconstructed with the help of some recently discovered inscriptions. The demand for books of political instruction like these, in a country with rising and progressive prospects, is best evidenced by the market they find; not any longer exclusively among scholars, but among a general public, deeply interested in its own destinies and the parallel development of the neighbouring countries.

For our purposes it will be sufficient to refer to the three additions which have been made to the collection in the course of the last twelve months, viz. vols. xv., xvi., and xvii., each of them connected with one of the countries forming the three southern extremities of Europe.

Professor Mendelssohn, the eldest son of the great musician, though still reckoned among the young historians of Germany, has already distinguished himself by a rapid succession of publications, chiefly in connection with the recent history of Germany and Austria, and by a more detailed production in the shape of a biography of Count Capodistria. The late Professor Gerwinus, eminent in so many branches of political and aesthetical literature, first drew his attention to the history of modern Greece, which Dr. Mendelssohn himself has visited three times since 1860. It appears from his short introductory remarks, that no works or materials whatever, which have been published on the subject in Greece, Germany, England, France, and even Russia, have escaped his notice. In mentioning them he is fond of adding some short pointed observations on the individual value of these productions, e.g. on Tricoupi's, Philimon's, and Finlay's writings. Baron Prokesch-Osten's *Geschichte des Abfalls der Griechen* has been reviewed at large by him in *Sybel's Zeitschrift*, vol. xviii. Our author has a decided talent for gleaming much curious matter, which others who went before him had left untouched. Not satisfied with admission into the record offices at Vienna and Berlin, he owes the opportunity of inspecting some of the most secret documents, both originals and the copies of letters of a more private nature, to the friendly confidence he has met with among the Greeks themselves.

The title of the work, only the first volume of which is now before us, has the fault of promising too much. The narrative does not really begin with the conquest of Constantinople in 1453, but rather with the first symptoms of national insurrection among the Greeks, when Catherine II. was waging her first war against Turkey, which led to the humiliating treaty of Kutshuk Kainardji in 1774. Hence the first chapter of but fifty-eight pages is nothing but a well-sifted and highly readable essay on the degraded condition of the people during their long period of humiliation under the despotic sway of the Turks, on the rise of their vernacular language and literature, their manners and customs, their popular traditions and religion, on *clephts* and corsairs. In this essay the ingenious but questionable theory of Falmerayer, as to the Slavonic origin of the modern Greeks, is once more refuted, as I thought to be, on historical as well as linguistic grounds.

The main subject, beginning of course with Rhigas, with Ali Pasha of Janina, with Prince Ypsilanti and the Hetaerists, is arranged with great skill over the bulk of the volume. The author writes in a fluent and even fascinating style, so much so that the reader will follow with pleasure and advantage the disclosure of the various nurseries from which the revolution sprang, its increasing relations with the European powers, the politics, whether separate or combined, of the latter, the state of parties, and the first constitutional

attempts of the Greeks themselves. The many extraordinary scenes, once so exciting to the generation which is now fast passing away, are well told. From Mesolonghi and the noble exertions of Lord Byron, which brought on his early death, we accompany the author to the "untoward event," the battle of Navarino, which concludes the volume. The author is stern in his condemnation of the ruinous egotism displayed on various occasions by the Greek rivals, the Philhellenes from the different European countries, or among the leading politicians in Russia, England, France, and Austria. Most important and hitherto unknown details on these points, in the shape of extracts from the diplomatic correspondence preserved at Vienna, are added in the appendix. From the indefatigable activity of the author it is to be expected that he will soon complete, in another volume, the story of the conclusion of the memorable struggle, and sketch as impartially as possible the vicissitudes under which its offspring, the present kingdom of Greece, has hitherto existed.

The first two volumes of Dr. Reuchlin's—a descendant by-the-by of his namesake the great humanist and contemporary of the Reformation—work on Italy, published in 1859 and 1860, have long been without a continuation. They threatened indeed to stop short with the second defeat and abdication of Charles Albert in 1849. For several years the rising of Italy, and the success of a national and united policy in that country, were nowhere so unpopular as in the south of Germany, especially in Würtemberg, where Austrian sympathies predominated largely down to the great catastrophe of 1866. The author, a frequent visitor in Turin and Milan, Florence and Rome, and on intimate terms with the chief patriots and statesmen—Cavour, Pallavicino, Ricasoli, and others—hints that his Suabian countrymen used to deride him as the "Cavourle," the little Cavour. However he has always been busy at work with his favourite subject. Two more long residences in Italy, among his best informed and influential friends, have provided him with a great amount of trustworthy matter, probably of more direct value than the average of official state-papers seems to be. After the way had been smoothed by a number of articles in some of the leading newspapers, in several historical and political journals of Germany, Dr. Reuchlin has given us at last a new instalment of his work. The stout volume contains hardly more than another decade, in which, moreover, Naples and Sicily are for the present omitted. Upper and Central Italy and Piedmont appear in the foreground. The new gathering of strength for a single great object, Cavour's first ministry, his coalition with the Emperor Napoleon, the war of the year 1859, the treaty of Villafranca, the condition of Modena and Parma, of the Papal States and Tuscany, and the severe crisis which led in January of the following year to Cavour's second and last government,—all these subjects are treated in succession most circumstantially, but in intimate connection with each other. The author promises to relate, in a fourth volume, the end of the Bourbons in Naples, and the first epoch of the Italian kingdom down to the autumn of 1866, trusting "that by the fall of Napoleon many an Italian mouth will be unlocked." Unfortunately Dr. Reuchlin is a rather heavy and clumsy writer, so much so, that his great advantages are to a certain extent neutralized by a certain incapacity of arranging his materials. In spite of the author's good humour and great affection for the prosperity of Italy, the reader cannot help wishing that so much excellent instruction had been given him in the plainest and most natural manner possible. Of course the usual difficulties of the historian are considerably increased by the politics of a country, which, until very recently, had many separate

centres of public life, which at all times were powerfully influenced from abroad. Even the peculiar nature of diplomacy, which in that country is so often akin to conspiracy, requires from an historian more than common literary power. But, nevertheless, though the author will not find many patient readers to peruse his book from beginning to end, he has provided the student and the politician with an admirable store-house for the period in question, full of the soundest information, and based upon an amount of reading among the most out-of-the-way papers, journals, and pamphlets, which very few other friends of Italy can have acquired to the same extent.

Professor Baumgarten had published a remarkable book on Spain, at the time of the French Revolution, before he undertook his present work, which, as many will agree, may be designated as the very best of the collection. In his second volume he narrated the events down to the year 1825, when the absolute government of Ferdinand VII. had been restored by the help of the French, but at the cost of nearly all the colonies and of the vital organs of the state itself. Besides the printed literature in the respective European languages, the author had the dispatches written from the Court of Madrid by the Prussian diplomatic residents at his disposal, and spent part of the year 1868 in Spain. He could thus observe with his own eyes certain changes for the better, which the country is unquestionably undergoing since 1820; and he, moreover, derived inestimable information from politicians and literary men, who were active either at the time or had been so at an earlier period. On the other hand, it is not to be wondered at, that the Spanish Record Office, under the Narvaez government, was closed against him. All short-comings, however, with regard to materials—a complaint most characteristic of Spanish affairs in general, witness the writings of the late Mr. Richard Ford—are most agreeably compensated by the good taste, finished style, and straightforward judgment, in which Dr. Baumgarten's work excels.

The third and last volume, which we wish most especially to recommend, treats mainly of the sad and tumultuous events which the Spanish nation had to endure between 1825 and 1840. Through a wilderness of apostolic conspiracies and liberal pronunciamientos, we accompany the most despicable Bourbon king to his wretched end, which was the signal for the outbreak of a war disastrous beyond comparison, civil and dynastic at the same time, an ordeal in which the old and the new elements to all appearance annihilated each other. Approaching the subject with somewhat of doubtfulness, we must confess that we never have read a more attractive account of the struggle between the Carlists and Christinos, the monotonous cruelty and ineffective results of which seem hardly worthy of the labours bestowed upon them by a conscientious historian. Yet the reader will soon accord the same praise to the five chapters in which the Basques are introduced with their ancient fueros and most primitive institutions. It is only such a race that can produce a party leader and military genius like Zumalacarrégu, by whose extraordinary discipline and example the cause of Don Carlos was chiefly supported through the successive campaigns of seven years. The awful trial of strength, which amid the listless attention of Europe or with the hesitating help of some few governments like the English Whig Cabinet, was ultimately decided in favour of Isabella II. and her mother, did not issue merely in a negative solution. Our author now and then very adroitly uplifts the veil for a view both retrospective and prospective. In his opinion King Ferdinand himself, on his return from captivity in 1814, destroyed most culpably the very conditions of Roman Catholic monarchy

in a country which before all others has ever been founded on orthodoxy and royalism. During the period of the civil war whatever had been left of old Spain was swept entirely away, whilst the resuscitation of a new national and political life has met with more checks than prospering chances. Don Carlos, as our author intimates, rushed inevitably on his ruin, owing to "the perversity of his principles and aims, and their glaring incompatibility, not only with the civilization of Europe, but with any other possible prospect for Spain."

After bringing down his narrative to Cabrera's capitulation in 1840 (in which, by-the-by, as a young military adventurer, one of the heroes of 1870-71—General von Goeben—was involved), Dr. Baumgarten in another chapter sketches the course of national development during the last thirty years. He shows no mercy either to the Moderados or the Progresistas, because neither of them allowed Spain to right herself by the expression of the free will of the nation. He condemns Espartero because he wielded his thoroughly despotic sword, however necessary it had become, not only without any genius whatever, but chiefly as the mere head of a party. By his fall in 1843, argues Washington Irving, then American Minister at Madrid, the degraded country was saved from the last state of anarchy. But what have the interminable changes led to after all? In fact, there have since been only two governments of any duration, those of Narvaez and O'Donnell, both of which, in spite of their reactionary and intolerant tendencies, had to succumb ultimately to the hostility of the camarilla and the court clergy. The result of the revolution of 1856 has been a comparatively quiet and prosperous period, till the year 1863 brought a return of the former chaos. R. PAULI.

The Pope of Rome and the Popes of the Oriental Orthodox Church.

By the Rev. C. Tondini, Barnabite. Longmans, 1871.

THE object of Father Tondini's book is professedly controversial. He desires to contrast the practical working of the principle of "monarchy," as exhibited in the Roman papacy, with the patriarchal or episcopal government of the Oriental and especially of the Russian Church, which he regards as the one essential difference between the two communions. For we are glad to observe that, in common with many leading theologians on both sides, and with the recent Munich Congress, he is fully convinced "that the much vexed question of the *Filioque* concerns terminology rather than dogma, and is susceptible of an amicable solution. The main design of his argument is to show that "the Oriental Orthodox Church is divided into several separate and independent *papacies*," and that the actual result is a system as purely Erastian as that under which the Church of England is administered. But, while the author's aim is controversial, it is fair to say that his argument is based on a careful analysis of facts, derived from original sources, which are here for the first time brought together within so small a compass. And the facts have an importance of their own, apart from the theological merits of the argument they are intended to subserve. The increased interest felt in the subject of late years in this country, which found expression in the warm welcome accorded to the Greek Archbishop of Syra, gives additional value to such a collection of statistics. And it is chiefly to this aspect of the work that we are anxious to direct the attention of our readers; who will be able to draw from the facts their own conclusions, which may or may not symbolize in all respects with that of the author.

The principal divisions of the Oriental Church were the Russian, under the government of the "Holy Synod" of

St. Petersburg; the four patriarchates of Constantinople, Alexandria, Antioch, and Jerusalem, and the Greek Church proper, ruled, since 1833, by the Synod of Athens; its members numbering in all about eighty millions, of whom fifty-six millions belong to the Russian Church. Practically therefore the chief interest centres in the Russian Church, though it is the youngest of the Orthodox communities, and is now wholly independent of the primatial see of Constantinople, as well from its numerical preponderance as because the Czar stands in the same sort of political relation to the Orthodox Church generally as the French sovereigns during the last few centuries have assumed towards Catholicism. But while in theory the episcopate under the four patriarchs form the governing body of the Orthodox Church in Russia, since the reforms of Peter the Great this principle has been virtually superseded. Peter, of his own authority, and not without some remonstrance on the part of his clergy, by an ukase of Jan. 25, 1721, abolished the patriarchate of Moscow, which had been established with the sanction of the four ancient patriarchs of the East, and substituted for it, as the supreme legislative and judicial tribunal for the whole Russian Church, a synod of twelve members, only three of whom were bishops, the remaining nine being made up by three archimandrites, three hegoumens, and three protopopes—all simple priests. Catherine II. limited the number to six, and through later modifications it now consists entirely of bishops, except that the Czar's confessor and the head chaplain of the army and navy are *ex officio* members. But the Synod, however composed, represents not the inherent authority of the episcopate, but the delegated authority of the Czar, just as the Judicial Committee represents the English Sovereign. As the legal code expresses it, "the imperial authority acts in the administration of the Church by means of the Most Holy Governing Synod appointed by it." An elaborate oath is exacted of the members of this "spiritual college," binding them to unconditional submission to the Czar, and to the obligation of promoting his service and interests to the utmost of their power—not unlike the oath required of Catholic bishops to promote the *Regalia Sancti Petri*—and also containing an express acknowledgment that the Czar is "the supreme judge of this spiritual college." The Czar therefore exercises the same supreme jurisdiction over the Russian which the Pope exercises over the Western Church, but, as he makes no claim to infallibility, his *doctrinal* power is allowed by Father Tondini to be strictly limited by the dogmatic canons of the ancient Councils; the *disciplinary* canons he can alter or abrogate at pleasure. As it is expressed by Schnitzler, a writer quoted with respect by our author: "S'il s'agissait d'être juge dans un débat sur des matières de doctrine, l'Empereur renverrait l'affaire au Saint Synode ou réunirait un Synode spécial, et dans un cas majeur il enverrait prendre l'avis des quatre Patriarches d'Orient. Il ne se réserverait à lui-même directement que l'exécution de la décision rendue, de la sentence prononcée." The author hardly appears to appreciate the full force of this distinction when he describes the supremacy of the Czar as in all respects equal with that claimed by the Popes, at least in view of the recent Vatican decrees. However the Czars formally style themselves, "Heads of the Church," and every Russian bishop is obliged to present annual reports to the Governing Synod of the state of his diocese, as Roman Catholic bishops are bound every three years for a similar purpose to visit the *limina apostolorum*. That the Czar should have the absolute appointment of all the bishops does not seem a very important distinction. Catholic sovereigns and governments exercise the same right wherever the Church is in any sense established, and even the Protestant king of Prussia

has an absolute veto on any nominee who is not a *persona grata* to himself. It is more strange that Russian priests should be ordered to reveal any treasonable plot disclosed in confession, and that on the ground of our Lord's injunction (Matt. xviii. 17), "Tell it to the Church." The state of things in Turkey and Greece is not substantially different. The Synod of Nauplia, composed of all the Greek bishops, in 1833 acknowledged the King as the supreme head (*ἀρχηγός*) of the Hellenic Church, where, however, he interferes much less than the Czar does in Russia. The Sultan appoints and can depose the four Patriarchs of the Byzantine Church, and to him, according to the Encyclical issued by them in 1848, are referred such "extraordinary and difficult questions" as they cannot settle among themselves. So far the author must be held to have made out his case, that in none of the three principal branches of the Oriental Church do the bishops really constitute, as according to orthodox doctrine they ought to constitute, the supreme authority.

It is also, we think, clearly made out that the various branches of the Orthodox Communion have no such external and governmental unity as exists under the jurisdiction of the Papacy. But when the author ridicules the complaint of Greek theologians, that "the doctrine of a visible head of the Church destroys her unity," he seems to us hardly to have grasped the point of the criticism. What they mean is probably, what some high Catholic authorities and some popes have themselves admitted or affirmed, that the centralising policy of the mediæval popes contributed materially to bring about and perpetuate the separation of East and West, and this view is confirmed by Tondini's avowed conviction that the difference hinges exclusively on the form of Church government. We cannot enter here on the wide and much vexed question of ecclesiastical "jurisdiction," about which various opinions have been advocated by Catholic theologians, who are by no means agreed in regarding the divinely ordained government of the Church as a pure monarchy. Lacordaire, for instance, insists on its combining and harmonizing the three typical forms of government, monarchy, aristocracy, and democracy. Nor does history altogether bear out the assertion of the "patent fact" that the extreme claims of papal prerogative are the surest if not sole guarantee for the authority and independence of the episcopate. Certainly very opposite statements were made by many bishops at the Vatican Council. But the real interest of Tondini's book lies, as we said before, not in his theological opinions or even in his controversial application of the argument, but in the mass of statistics not generally accessible which he has collected in a brief and readable volume. For controversial purposes it should be read in connection with such works as *Janus* or Schulte's *Die Stellung von Concilien, Päbsten und Bischöfen*.

H. N. OXENHAM.

Intelligence and Contents of the Journals.

M. Michelet has begun a continuation of his great history under the title of *Directoire—Origine des Bonaparte*. There are some curious details on the mode in which Bonaparte was enabled to obtain the necessary supplies for the army of Italy in 1795. The author's main object, however, is to describe the growth of the "military system" and its long struggle with the "industrial systems" of England. The preface contains some notices of his own life, and it is needless to say of Michelet that his aversion to England still displays itself vividly and is sometimes extremely absurd.

Literarisches Centralblatt, March 16.—Notices the publication of Conrad Justinger's *Chronicle of Bern*, one of a series of old Swiss chronicles now being critically edited; and the conclusion of Rosbach's *Geschichte der Gesellschaft*, the 4th part contains the history of the rise of the Middle Classes, especial attention being devoted to England.—March 30.—Notices Paul Meyer's *Les derniers Troubadours de la Pro-*

vence and the *Vie de S. Alexis*, both valuable for French philology.—April 13.—Notices the concluding volumes of Winter's *History of the Cistercians in North East Germany*, and criticizes unfavourably Klippel's *Life of General von Scharnhorst*.—April 20.—Reviews Tourtal's *Dispatches of Ridolfi*. Ridolfi was Florentine Resident at the Imperial Court during the Diet at Ratisbon in 1641, but we get little new information from him.

The Growth of the English Constitution from the Earliest Times, by E. A. Freeman, contains the substance of some lectures delivered at Leeds and Bradford. Mr. Freeman's object is to give in a popular form the results of his researches into our early history, and stress is laid on two favourite ideas—that of the continuity of our history, and that of the revival in later times of early institutions which had perished after the Conquest. The unwritten rules of our constitutional law are also considered, and it is shown how important they have tended to become of late. Every one knows that in theory the prerogatives of the Crown are as great as ever, while practically the real power is in other hands. The error of many writers on the constitution has been that they have looked merely to the outward forms and not regarded the living forces that act through those forms.—We should notice also Mr. Freeman's address as President of the Somersetshire Archaeological Society, in which he shows the importance of connecting local enquiries with the general history of the country. We might point to his own account of York and Exeter and Lincoln, in the 4th volume of the *Conquest*, as illustrating his meaning. Similarly in an address to the Historical Section of the Archaeological Institute, at its annual meeting held this time at Cardiff, he illustrates from local knowledge the succession of races in Great Britain, the fusion of which has made the English nation.

Altpreussische Monatsschrift, February-March.—Contains an account of the MSS. illustrating the history of "Preussen" (Prussia in the narrower sense) in Prince Czartoryski's Library at Paris; a document of the Teutonic order in 1316—one of our earliest original documents in German; a full account of the tumuli opened in the district (Wulfstan's report to King Alfred is the earliest description we have of the mode of interment among these tribes), which is worth comparing with Canon Greenwell's explorations in Yorkshire; some extracts from unprinted Russian chronicles; and a notice of the original MS. of Copernicus' *De Revolutionibus Orbium Coelestium*.

The newly discovered fragment of John of Antioch, published by Mommsen (*Hermes*, vi. p. 322 ff.), from Professor Geppert's transcript of the MS. in the Escorial, contains an account of the death of Odoacer after his surrender to Theodoric, confirming a previous conjecture on the subject by Professor Felix Dahn, who announces his intention of shortly discussing the whole passage. Ten days after the capitulation, Theodoric sent for Odoacer to his palace; as he entered, two men seized his hands as if about to make a request; this was to be the signal for assassins from the next room to enter, but their resolution failing, Theodoric himself ran his rival through with his sword, exclaiming as he withdrew it, "the wretch (τὸ κακὸν) had not even a bone in his body." Odoacer's widow, "Sunigilt," was starved to death in prison, and their son, Thila, put to death on his return from banishment.

The 17th volume of the *Transactions of the South Slavonic Academy* (*Rad Akademije Tugoslavenske*) contains an interesting dissertation of Dr. Racki on the origins of the Croatian kingdom; and the second part of Prof. Tagić's study upon the Progress of Slavonic philology in the last years. Prof. Tagić has been recently appointed by the Russian government Professor of Philology at the University of Odessa.

Theolog. Literaturblatt, March 12.—Notices the conclusion of Caravita's *I Codici e le Arte a Monte Cassino*.—A. von Reumont has a very full account of Adolf Trendelenberg's *Kleine Schriften*, especially as regards the account of Machiavelli and his object in writing *The Prince*.

New Publications.

- ARCHIV FÜR OESTERR. GESCHICHTE. 47. Bd. 2. Hälfte. Wien: Gerold's Sohn.
- BEER, A. Die Zusammenkünfte Josefs II. u. Friedrichs II. zu Neisse und Neustadt. Wien: Gerold's Sohn.
- CHÉRUEL, A. Lettres du Cardinal Mazarin pendant son Ministère. Tome 1^{er} (Déc. 1642—Juin 1644). Paris. (Collection de Documents sur l'Histoire de France.)
- COOPER, Thomas, The Life of. Written by himself.
- D'OKSZA, Th. Histoire de l'Empire ottoman depuis sa fondation jusqu'à la prise de Constantinople. Tome 1^{er}. Constantinople.
- DU MESNIL-MARIGNY. Histoire de l'Économie politique des anciens peuples de l'Inde, de l'Égypte, de la Judée et de la Grèce. 2 vols. Paris: H. Plon.
- ELGIN, Letters and Journals of James, Eighth Earl of, Governor of Jamaica, Governor-General of Canada, Envoy to China, Viceroy of India. Edited by Th. Walrond, C.B. With a Preface by A. P. Stanley. Murray.

- FREEMAN, E. A. The Growth of the English Constitution from the Earliest Times. Macmillan.
- HERMINJARD, A. Correspondance des Réformateurs dans les pays de langue française. Tome IV. Basel: Georg.
- HOOKEHAM, Mrs. The Life and Times of Margaret of Anjou. 2 vols. Tinsley.
- LEBLAN-DAVAU. Recherches historiques et statistiques sur Auxerre, ses Monuments et ses Environs. (Auxerre, 1871.) Paris: Dumoulin.
- LEVI, L. History of British Commerce, and of the Economic Progress of the British Nation, 1763-1870.
- LÖSERTH, J. Die Geschichtsquellen v. Kremsmünster im XIII. u. XIV. Jahrh. Wien: Braumüller.
- MICHELET, J. Histoire du XIX^{ème} Siècle. Directoire—Origine des Bonaparte. Paris: Baillière.
- MOLESWORTH, W. N. History of England from 1830. Vol. II. Chapman and Hall.
- PAZ-SOLDAN, M. F. Historia del Perú independiente. Primer periodo, 1819-22. Hâvre.
- ROSSBACH, J. J. Geschichte der Gesellschaft. 5. Theil. Der vierte Stand und die Armen. Würzburg: Stuber.
- SALINAS, Ant. Le Monete delle antiche città di Sicilia. Palermo.
- SEGUR-DUPEYRON, P. DE. Histoire des Négociations commerciales et maritimes de la France aux XVII^{ème} et XVIII^{ème} siècles, considérées dans leurs rapports avec la politique générale. Paris: Thorin.
- SICKEL, Th. Zur Geschichte des Concils von Trient (1559-1563). Actenstücke aus österreichischen Archiven. Wien: Gerold's Sohn.
- STATISTICA del Regno d'Italia. 5 vols. Milano.
- WADDINGTON, W. H. Fastes des Provinces asiatiques de l'Empire romain depuis leur origine jusqu'au règne de Dioclétien. 1^{ère} partie. Paris.

Philology.

Scaenicae Romanorum Foesii Fragmenta secundis curis recensuit Otto Ribbeck. Vol. I. Tragicorum Fragmenta. Leipzig: Teubner, 1871.

THAT a second edition of the fragments of Latin tragic poetry should appear within twenty years of the first is another indication of the increasing attention which the early literature of Rome is still attracting to itself, indeed a very strong one; for, as poetry, these remains are so slight, and, as compared with the corresponding fragments of the Greek tragedians, so poor and inartistic, that the reader of them, even when helped by the lucid arrangement and beautiful typography of the edition before us, is obliged to summon to his aid all the adventitious interests of a yet new subject to carry him through the volume. With this admission, this new edition of the *Fragmenta Tragicorum* may be considered an interesting, as it is beyond doubt a very valuable, accession to our knowledge of early Roman literature; and it may perhaps be said that the light which these fragments throw on Latin philology alone is enough to compensate for their tediousness as poetry. Add to this the palaeographical interest of disentangling the more and more resolvable perplexities of the authors by whom they are quoted, and the gradually increasing conviction which the careful study of those authors produces, that much which at first seems doubtful or insoluble in these venerable remains may, and probably will, find a clear and almost certain solution in the hands of the carefully trained scholars of the present generation. This is especially true of Nonius, the largest contributor to the collection, but it is likely to be more true than it is as yet of Varro, Festus, and the Grammarians; and we can hardly fail to see why it is that works like this command a steady sale, and pass rapidly into a second and third edition. There is besides the eminently German (it can hardly be said to be an English) virtue of working up all the available materials which the industry of ancient and modern scholars places within the editor's reach; M. Ribbeck's second edition in this respect is a proof of the goodness of his first. In the nineteen years

which have elapsed since the work was originally published, the most eminent scholars of Germany, Ritschl, Bergk, Mommsen, Haupt, Fleckeisen, Bücheler, Corssen, and a host of others, have either themselves emended the fragments or contributed new facts or statements which help to elucidate them. It is sad to find few or no English names, only one or two French, among them: yet we venture to think that Latin philology has received a new impulse among us, and almost hope that, if a third edition shall, as is very likely, ever be forthcoming, it will contain at least some English contributions of consideration.

The present edition differs from the first mainly in two points, its increased bulk and the absence of any discussion as to the place of the fragments in the dramas to which they belonged. Ribbeck reserves this for a separate volume; but it is to be hoped that where plausibility is all that can be looked for, he will allow the temperate and rarely extravagant views which the essay in his first edition contains to remain substantially as they were. He has followed this course consistently in retaining the fragments in the same order and numbering as in the first edition; a saving of time of incalculable value to the student, and which, as a principle of economy, is worth a great deal. By way, however, of supplementing his book, M. Ribbeck has prefixed a Corollarium of lxxviii pages containing a further discussion of the more doubtful fragments, with the suggestions of Bücheler, Usener, and Adolf Kiessling; some of these seem to bear marks of haste, though they add no doubt to the interest of the book: generally the results of the Corollarium are to leave undecided what was undecided before.

Nor is it possible to speak with entire satisfaction of the conclusions at which M. Ribbeck has arrived in constituting his text. It is true that the apparatus, which is at once clear and full, enables any one who will take the trouble to form his own conclusions on the data furnished by the MSS.; and it is equally true that where new words are inserted to satisfy the demands of the metre, these words are distinguished by brackets from the rest. Nor can it be denied that the large proportion of undoubted senarii and septenarii justifies the preference which in common with most editors M. Ribbeck shows for those metres; and the restitutions which he has effected on this hypothesis are not few, and in some cases, we think, beyond dispute. Yet there are places where the MSS. point as unequivocally to other rhythms, bacchiac, cretic, or, as in spite of M. Ribbeck we must think, saturnian. We shall give specimens of each, beginning with the last. Nonius gives a line from the *Ajax* of Livius Andronicus thus—

*Præstatûr virtuti laus; gelû set multo
Ocûs uenio tabescit,*

i.e. probably—

Ôcûs uento . . . tabescit,

a passage which seems clear enough to justify the inference that the early writers for the stage mixed saturnians with the other exotic rhythms. Att. 558, *heu Mulciber Arma ignauo inuicta es fabricatus manu*, is reduced by Hermann to senarii by inserting *ergo* after *arma*. It is easier to suppose them cretics. The line from Ennius' *Iliona*, fr. iv. Ribb.—

Age asta, mane audi, itera dum eadem istae mihi,

must be, as Fleckeisen constitutes it, bacchiac; and this is, if I am right in so conjecturing, the metre of part of a much-disputed passage quoted by Nonius, 407, 22, in illustration of *tenacia*. It is written in the MSS. as follows: *ducet quadrupedum iugo inuitam doma infrena et iuge valida quorum tenacia infrenari minis*, i.e.—

duc et quadrupedem iugo,

Inuitam doma infrena et iunge,

Valet equorum tenacia infrenari minis.

The first of these verses is either a short trochaic line or the end of a longer iambic or trochaic verse; the second is composed of three bacchi; the third is apparently cretic, if we may suppose the two last syllables of *tenacia* slurred into one, or for *infrenari* read *frenari*. Another passage in Nonius from the *Lycurgus* of Naevius, which runs as follows: *nam ut ludere lactantis inter se uidimus praeter amnem creterris sumere aquam ex fonte*, and is given by M. Ribbeck as trochaic—

Namque ludere ut lactantis inter sese uidimus

Propter amnem, aquam creterris sumere ex fonte . . .

more naturally divides into two bacchi with an anacrusis—

nam ut ludere

Lae | tantis interse uidimus praeter amnem

Cre | terris sumere aquam ex fonte;

and the same metre is perhaps traceable in a fragment of the *Neoptolemus* of Attius, i. Ribb. Nonius gives it as follows: *quid si ex Graecia omne illum par nemo reperiri potest*, which M. Ribbeck reduces to iambic senarii—

quid si ex Graecia

Omni illius par nemo reperiri potest?

but which is with less violence written—

quid si ex Grae | cia

Omni illum par nemo reperiri potest?

where *illum* for *illorum* is an old conj. of Voss, and suits the passage grammatically as well as *illius*. It is no doubt an indication of the difficulty of settling such metrical points that a line which bears on its front so clear an impress as—

Quamquam annisque et ætate hoc corpus putret (Pac. 340)

was at first considered by M. Ribbeck to be a truncated senarius, and that Ritschl, who determined it to be bacchiac, as it surely must be, arranged it by the help of the newly revived *d* (*actated*) as possibly also a senarius.

This brings us to a further point of criticism. Ritschl's lately published pamphlet on the final *d* has had more than what we consider a desirable influence on the editor of the fragments. After all Ritschl's arguments we still look upon the introduction of this final *d*, whether abl. or acc., with distrust. It is worth while to examine this with some minuteness, and we therefore write out at length such of the lines in which this final *d* is reintroduced, as far as we have at present examined, in M. Ribbeck's volume.

Liv. 26. *Ego puerum interea ancillae subdam lactantem meae.*

Ribb. *interead*; in his first edition he supposed a syllable lost at the beginning of the line; metrically this is less harsh; *interead* not only makes a singularly unrhymical line, but is without any MS. support.

Pac. 39. *Qui se icit quam illum eumpse lapidem, qui ipsa icta est, petit.*

Sed for *se*, Ritschl: yet *se* is very often written for *sese* in the MSS. of Nonius, and so Voss here, and Ribb. in his first edition.

Pac. 150. *Sed ne incertat dictio: quam rem expedi.*

Med for *ne*, Bothe; but *ne* is not certainly even *me*, much less *med*: and if it were, we cannot be sure that we have a complete senarius.

Pac. 225. *Quid tandem? ubi ea est? quod receptat? exul incerta uagat.*

Quod receptast? Ribb. accepting *quod*, on Ritschl's suggestion, for *quo*: yet even if *receptast*, the conj. of Bergk, is

right, confusions of *quo* and *quod* are too constant to make any argument in defence of a final *d* derived from this passage of weight.

Pac. 237. *Qua super se interfectum esse Hippotem dixisti.*

Ribb. reads *sed*, and inserts *tu* before *esse*, inverting the position of *Hippotem* and *dixisti*. Little as we can approve of L. Müller's—

Qua super se interfectum esse dixisti Hippotem,

we approve as little of M. Ribbeck's *sed*. The line seems to be, as M. Ribbeck himself thought in his first edition, a cretic tetrameter, reading *dixisti Hippotem*.

Pac. 248. *Pariter te esse erga illum uideo ut illum te (ted, Ribb.) erga scio.*

315. *Postquam defessus perrogitando (-dod, Ribb.) aduenas.*

These two cases are to some extent on a level; the insertion of the final *d* is an easy, even a natural, expedient; very probably it was so written by Pacuvius: at any rate, *te erga* is impossible, even if *perrogitando* is allowed to stand as a hiatus. Yet other hypotheses are also possible, e.g. *te erga rescio, perrogitando st*, or even as Umpfenbach and Bücheler: at any rate no one can say that these instances, and they are the strongest we have met with, prove the final *d* in the Latin Tragic. Equally disputable are other archaisms introduced without necessity, e.g. *quamde* in Att. 267—

Melius pigrasse quam properasse est nefas;

where *quam* is perhaps a corruption of *quando* or *quoniam*; *lumpis*, Pac. 244, for the MS. *lymphis*: not that such forms may not be orthographically correct for the time of Pacuvius; but that M. Ribbeck's work ought to speak authoritatively, and authority in such cases is incompatible with anything like considerable deviation from the MSS. On the same principle M. Ribbeck, we should have thought, would have done better in retaining what look like remnants of ancient constructions. Thus in Pacuv. 330, *qui tibi in tutela est traditus* is quite archaic, like Cato's *ponere, condere*, &c. with *in* and an ablative; cf. Virgil's *Mandet humo solita*; and so in Att. 494—

Cum somno in segetem agrestis cornutos cient,

the simple abl. *somno* should have been kept, even if Catullus' *fallaci excita somno* is not enough to defend it. Again, why should *super satis agere*, Pac. 72, be altered into *semper satis a.*, when the combination *satis superque* recurs so often? or the substantival infinitive, *Concertare ac dissentire partem da(t) cursum acquiter*, "to dispute and disagree in part (? that part should dispute and disagree) gives free course on both sides," be tortured into—

Concertare ac dissentire parti ac da cursum acquiter?

In the immediately following passage, Pac. 75, may not the MSS. reading *domitum imperium*, "the tyranny to which they are broken in," be right? and in Pac. 102—

Ossuum inhumatum aestuosam auram,

does not *auram*, "vapour," suit the sense better than *aulam*, "a pot"? It may be said that in Pac. 114, *hymenaeum fremunt Aequales, aura resonit crepitu musico*, Euripides—

Ἀργεῖαι τε νῦν
ὁμνοῦσιν ὑμεναίοισιν ἀλκείται δὲ πᾶν
μέλαθρον (I. T. 355),

points to *aula* (Scaliger) as a more than probable correction; still the four words of the former fragment ought to be judged by themselves; a principle, we think, scarcely estimated at its full value by M. Ribbeck. In Pac. 161-3—

*quo tamen (! quo iam me) ipsa orbitas
Grandaeuitasque Pelci per penuriam
Stirpis subaxit,*

where Ribb. reads *penuriam, subauxit*, it may be a question

whether *subaxit = subegerit* is not more in conformity with *per penuriam*: particularly as *subaugere* seems to have no existence. In Pac. 194—

Sed haec cluentur hospitum infidissimi,

where L. Müller proposes *haec = hi*; it seems more likely that *haec*, "these parts," is genuine.

In the well-known fragment from the *Iliona* (197-201), *suspenso somno*, the reading of the best MSS. is in complete accordance with the language of other writers; sleep as a god is represented as hovering lightly over the sleeper, or transferred to a state of somnolence, the same word naturally passes into the idea of a light sleep, ready, so to speak, to take wing with the least disturbance. In 200, where the MSS. give *neu relliquias semiassi reis denudatis ossibus*, after Haupt's obviously true emendation, *sireis*, there can be little doubt that the whole line ran, as Bentley in part suggested—

Neu relliquias semiassi sireis denud. ossibus.

Another fragment of the same play—

Fac ut coepisti hanc operam mihi des perpetem, oculis traxerim,

is, with the change of *coepsti*, too good a verse to be altered: *oculis traxerim* would seem to mean, "let me drink it in with my eyes," like *haurire oculis*, &c.

Enn. Eum. 132—

*Tacere opino esse optimum et pro uiribus
Sapere atque fabulari tute noueris,*

needs only an *ut* before *tute* to make the sense intelligible: "I consider it best to be silent, and to show such wisdom as one can, and only to speak in accordance with one's own knowledge."

Enn. 360—

*Animus aeger semper errat, neque pati neque perpeti
Potest,*

pati, not *poti*, must be right: "it can neither bear nor bear out."

These remarks are offered with profound deference to the eminent scholar whose contributions to Latin philology are so well known and so undeniable. In works like that before us the method may be said to be half the battle; and M. Ribbeck's editions of the Latin Tragic and Comic fragments were among the earliest specimens of that distinct arrangement of text, authorities, and critical apparatus, which has since become *de rigle*. If we have ventured to question some of the conclusions of this new edition of the Tragic fragments, it is with a deep sense of the immense profit which every careful reader must derive from its learning and research, the felicitousness, nay certainty, of many of its emendations, in a word the impress of thoroughness and mastery which it displays throughout. In such men doubts mean so much that they are almost better than other people's certainties: that M. Ribbeck's second thoughts seem sometimes less probable than his first is a sure indication of the progress, to which no one has contributed so largely as himself, of the study in its multifarious departments of Latin philology.

R. ELLIS.

THE MANUFACTURE OF INSCRIPTIONS.

THE pretended discovery of "another Moabite stone," purporting to be set up by Moses in honour of himself, was published by Mr. Lumley in the *Times* one day, and contradicted by him the next. It was at once pointed out to him that the monument in question had already been published and philologically explained in the Quarterly Statement No. VI. of the Palestine Fund (1870), and *Zeitsch. d. d. morg. Gesellschaft*, 1871, p. 429, &c. But how are we to account for the differences between that simple Nabataean sepulchral inscription, which no doubt has not been copied with perfect accuracy, and the copy brought home by Mr. Lumley, but deciphered in utter contempt of philological

principles? It is obvious that only one stone with such an inscription can be in existence; and not less so, that if it was found in Umm-er-resās (and this is quite certain), the same inscription cannot have come to light in Medeba, a place which is certainly a good distance off. But there is another point equally certain, viz. the original identity of the characters of both the inscriptions. We only find some slight alterations in the form, and the mode of connecting and separating single characters. We also find the characters distributed in six lines in the new copy, whereas the genuine monument presents only four lines. A copy revised in accordance with the original one of Bechnam has only a few indistinct marks on a fifth line. But when Shapira's explanation of the stone is exploded, we naturally ask, whence comes the stone seen by Mr. Lumley at Shapira's house, 36 inches by 18, close granite, with a six lines' inscription? Clearly there is a monument in existence, manufactured probably by Shapira as an article of trade. A clever fraud for Jerusalem, but clumsy enough for any one who knows inscriptions! There is no misunderstanding here, as some might be inclined to think, for this is not the only suspicious inscription which has passed through the hands of Shapira. When M. Ganneau lately discovered a stele with a Greek inscription, forbidding non-Israelites to enter the inner court of the temple, and thus harmonizing beautifully with Josephus, Shapira soon afterwards produced a similar though smaller stone of the same purport, which was asserted to have been found on the same spot. He refused however to allow a "squeeze" to be taken on account of pending negotiations for its sale. A third stone in the possession of the same man is much more suspicious. The characters are said to agree with those of the stone of Mesha—and of course it is quite possible that other stones of the kind exist—but we are told that, according to Shapira, the Beduin, who is said to have brought the stone, refused to mention the place of its discovery. The monument, which is 2½ feet long, 1½ foot broad, and 8 inches thick, contains four lines with 86 letters. The first three lines are said to contain the 117th Psalm. As if psalms were ever engraved on stone! Our own thoroughly trustworthy correspondent writes: "I have already had people in Jerusalem pointed out to me who know about the manufacture of this stone. The characters have been well scratched in; but the stone has lain in a kind of lye, so as to get an antique appearance." Lately, too, I received two more "squeezes" of newly discovered Nabataean inscriptions. On examination, the one (you can see traces of the stone on it!) which passed through Shapira's hands stands in the same relation to the genuine inscription as his copy from Medeba to the genuine inscription of Umm-er-resās.

These facts seem to establish the existence of a flourishing manufactory of inscriptions in Jerusalem. Whether Shapira is the only partner in the concern or not is uncertain; but we feel bound to address a warning to scholars, and particularly to travellers in Palestine. Mr. Lumley is not the only person who has been deluded by Shapira, for a letter from Jerusalem in the *Athenæum* for March 9 refers apparently to several of his forgeries as "very interesting and valuable inscriptions." Being personally acquainted with Shapira, we can state that he embraced Christianity from purely sordid motives. His character is just suited for a forger of inscriptions, as also his half-scholarship and his Jewish-German. The want of tact exhibited in various quarters in the tragic history of the Moabite stone begins to bear fruit. Beduins go in quest of inscriptions; then pashas extort them from them out of avarice, and play the part of harem-guardians of Semitic monuments; and the last result is now before us—the convenient though clumsy system of forgery.

ALBERT SOCIN.

Intelligence.

The well-known traveller Captain Burton feels called upon to correct some omissions and misstatements in the current accounts of the Moabite stone. In the *Athenæum*, April 13, he gives a *résumé* of the palaeographical, linguistic, and historical peculiarities of the inscription, and flings an undeserved taunt at the scanty band of English scholars. He boldly asserts that "short vowel-points appear in parts of the inscription," and that, among other "shades of meaning" (!) there is a dual termination *-im*, and a plural *an*; refers Isa. xiv. and xv., "the so-called Isaiahic writings," to the reigns of Uzziah, Ahaz, and Hezekiah; and contemptuously dismisses the historically important narrative in 2 Kings iii. His second paper (*Athenæum*, April 20) opens with a list of articles, &c., on the inscription, which, except its

incomplete supplement, is borrowed without acknowledgment from Dr. Wright. The author then examines one by one the statements of Dr. Petermann in the German Oriental *Zeitschrift* for 1870 with a fullness and authority which would carry conviction were it not for his undisguised anti-German bias. Both articles are full of misprints. We have to thank the author for the information that M. Ganneau is quite willing to part with the stone, but that complications have arisen with the Comte de Vogüé.

A new work, by Dr. Richard Volkmann, on the rhetorical systems of the Greeks and Romans (Berlin: Ebeling and Plahn), contains an exhaustive collection of the material furnished by the Greek and Roman rhetoricians, Aristotle, Cornificius, Cicero, and Quintilian, also the grammarians and scholiasts, their precepts being illustrated by numerous examples from the Attic orators and Cicero. The work endeavours to show that the rhetoric of the ancients is not an arbitrary *olla podrida* of absurd and pedantic rules, but a thoughtful and refined structure of great perspicuity, and which may be of importance even to our own time. Another publication of the same firm is an essay by the younger Kinkel, *On Euripides' Relation to Art*.

New Publications.

- AHLWARDT, W. Bemerkungen üb. die Aechtheit der alten Arabischen Gedichte, mit besonderer Beziehung auf die sechs Dichter, nebst Beiträgen zum richtigen Verständniß Ennābiga's und 'Alqama's. Greifswald: Bamberg.
- BELLOQUET, ROGET DE. Ethnogenie gauloise: Mémoires critiques sur l'origine et la parenté des Cimmériens, des Cimbres, des Ombres, des Belges, des Ligures et des anciens Celtes. 1^{ère} partie: Glossaire gauloise. Paris: Maisonneuve.
- BERGMANN, F. W. Sprachliche Studien. (3. Serie.) Leipzig: Brockhaus.
- BERTRAM. Ilmatar. Comedia Turanica. Esthnisch u. Deutsch. Dorpat: Gläser.
- BEUNANS MERIASEK. The Life of St. Meriasek. A Cornish Drama, with translation and notes, by Whitley Stokes. Trübner.
- BRUGSCH, H. Grammaire hiéroglyphique, contenant les principes généraux de la langue et de l'écriture sacrées des anciens Égyptiens.
- BRUGSCH, H. Index des Hiéroglyphes phonétiques, composé et appliqué à son Dictionnaire hiéroglyphique.
- CHI-KING; ou, Livre des Verses. Traduit pour la première fois en français par G. Pauthier. (Bibl. orient.) Paris.
- DOOLITTLE, JUSTUS. A Vocabulary and Handbook of the Chinese Language: romanised in the Mandarin Dialect. Vol. I. Trübner.
- DOWSON, J. A Grammar of the Urdu or Hindustani Language. Trübner.
- DÜNTZER, H. Homerische Abhandlungen. Leipzig: Hahn'sche Buchhandlung.
- EICHHOFF, F. G. Hymnes du Rigvéda imités en vers latin. Pp. 6. Paris: Maisonneuve.
- EUCKEN, R. Ueber die Bedeutung der aristotelischen Philosophie für die Gegenwart. Berlin: Weidmann'sche Buchhandlung.
- EUTROPII BREVIARIUM ab urbe condita. G. Hartel recogn. Berlin: Weidmann'sche Buchhandlung.
- FABER, A. De Minucio Felice Commentatio. Nordhausen: Haacke.
- HEIMSKRINGLA eda Sögur Noregs, herausgeg. von Linder u. Hagson. Konunga Snorra Sturlusonar. III. Bd. Upsala: Lundequist.
- HERTZ, M. Die Verdienste des preussischen Königspaars um die Erforschung des classischen Bodens. Breslau: Barth.
- HOMER'S ILIADÉ erkl. v. J. W. Faesi. 2. Bd. 5. Aufl. Besorgt v. F. R. Franke. Berlin: Weidmann'sche Buchhandlung.
- LORENZ, O. F. Collationen d. Codex vetus Camerarii (B, Biblioth. Vatic. Cod. Palat. 1615) u. d. Ursinianus (D, Vatic. 3870) zur Aulularia d. Plautus. Berlin: Calvary.
- MÜLLER, J. G. Die Semiten in ihrem Verhältniss zu Chamiten und Japhetiten. Gotha: Besser.
- RELIGIAR DIALLECTI CRETICAE. Pars I. Glossae Creticae cum commentariolo de universa Creticae Dialecti indole. Scripsit M. Kleemann. Halle: Lippert'sche Buchhandlung.
- RIGVÉDA; ou, Livre des Hymnes. Traduit du Sanskrit par A. Langlois. (Bibliothèque orientale.) 2^{ème} édition, revue, corrigée et augmentée d'une index analytique par Ph. Éd. Foucaux. Paris: Maisonneuve.
- SHARPE, S. The Rosetta Stone in Hieroglyphics and Greek, with Translations and an Explanation of the Hieroglyphical Characters, followed by an Appendix of Kings' Names. J. Russell Smith.
- STRAUMER, F. De Ciceronis quae fertur, oratione apud Cassium Dionem Commentatio. Chemnitz: Brunner.
- TERENTI HAUTON. Timorumenos. Erkl. v. W. Wagner. Berlin: Ebeling u. Plahn.
- VALENTINELLI, J. Bibliotheca Manuscripta ad S. Marci Venetiarum. Codices MSS. Latini IV. Venezia: Tip. del Commercio.